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Fundamental concepts of modern philosophy



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THE
FUNDAMENTAL CONCEPTS
OF
MODERN PHILOSOPHIC THOUGHT,
CRITICALLY AND HISTORICALLY CONSIDERED.

BY
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WITH ADDITIONS AND CORRECTIONS BY THE AUTHOR,
AND AN
INTRODUCTION BY NOAH PORTER,
PRESIDENT OF YALE COLLEGE.

NEW YORK:
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INTRODUCTORY ESSAY.

THE author of this volume has undertaken the very important service of writing a critical history of the terms and conceptions which are of special interest at the present time in literary and philosophical circles. The table of contents shows on what principle they have been selected. The list is very far from including all the technical terms of either science or philosophy. It contains few which are strictly scholastic or technical. The few which originated in the schools of modern speculation and criticism have come forth from the schools and taken a strong hold of thoughtful and cultivated men who are neither philosophers nor scientists by profession. Most of these—like *Subjective* and *Objective*, *Monism* and *Dualism*, *Development* and *Evolution*, *Realism* and *Idealism*, *Optimism* and *Pessimism*, *Culture* and *Humanity*—have come into current use within the past few years, and represent some new principle or distinction in philosophy, some important theory or discovery in science, or some novel doctrine or conceit in ethics, art, or criticism. Scarcely one, however, is a product of the present century, like those multi-

tudinous technical terms of chemistry or natural history which originally designated conceptions as novel as their names. Most of the terms treated in this volume have been in use for many generations, though only a small number may have been long employed in the special significations which they have finally assumed, and which give them their present interest and importance. It is obvious that the gradual emergence of such terms from occasional and uncertain use into permanent recognition with sharp and definite meanings must necessarily indicate a positive movement of human thinking for better or for worse. Not infrequently such a movement is equivalent to a revolution in literary opinion or scientific theory.

In every instance the question is always curious and often instructive, What was the popular and general meaning of the term before it crystallized into its special and fixed meaning? Or, if it were originally a term of the schools, by what steps of transition did it proceed from one meaning to another, till finally it took on a signification which was the opposite of that which it originally bore, or till two correlated terms completely interchanged their significations? The remark of Coleridge is often repeated, that "there are cases in which more knowledge of more value may be conveyed by the history of a word than by the history of a campaign." This is emphatically true, and more; for, in cases not a few, the history of a word is the history of an actual campaign of patient research or active controversy.

We may not forget, however, that the history of words does not always record the progress of exact thinking or verified truth. The shifting and subtle changes of meaning in words may as effectually obscure and mislead the thinking of an age or a school as make it clear and solid. Especially is this true of terms of science or of philosophy. Words of very high generalization may, by reason of their abstract character, be more easily used by the philosophical magician, first to bewilder himself, and then to mislead his fellow men. The history of speculation in every age enforces the truth that, the more abstract an important term becomes, it may be the more readily personified into a living force or law by the vivid imagination or the confident reiteration of a brilliant theorist. The farther a word is removed from common use, the more easily may it be worshiped as a bedizened fetish by the devotees of a philosophic leader, or hooted at as a scarecrow by his antagonists. The more remote any subject matter is from any possible verification by experiments or the realities of every-day life, the more brilliant and delusive may be the attractions of plausible hypotheses, if these are only set off by the jugglery of philosophic word-play. For these reasons it becomes especially important, in an age of intense scientific activity and philosophical enthusiasm, that every earnest seeker after truth should scrutinize with the utmost care the terms that are occupying the attention of the public, if he desires to master the conceptions for which they stand.

There is no method by which he can do this so effectually, and I may add so pleasantly, as by the study of their history. In this way, and in this way only, will he be able intelligently to accept and successfully to defend what is true in the new thinking which is sure to arouse every generation, and at the same time to reject what is false with an enlightened and liberal spirit.

The author of this volume has very wisely limited himself to a few topics, which he has as wisely selected because of their comprehensive interest and importance. The conceptions of which he gives the history, and which he subjects to acute criticism, are all of present and exciting interest. Many of them have a practical as well as a speculative importance. Some of them concern the grave and interesting problems of Duty and Faith and Immortality. To the history and criticism of these conceptions, and their terminology, Professor Eucken has brought thorough and careful reading, acute and candid criticism, and a clear and solid style. While he is at home among the systems of the past, he seems equally familiar with the controversies of the present. Above all, he has studied brevity, and has mastered the art of expressing in few words the results of patient research and critical discrimination.

The writer of this notice was constrained to recommend the work for translation to his friend and former pupil by his estimate of the intrinsic value of the treatise, and the desire that it might be brought within the reach of English readers, as eminently suited to the

times. He can say with an assured confidence that there are few books within his knowledge which are better fitted to aid the student who wishes to acquaint himself with the course of modern speculative and scientific thinking, and to form an intelligent estimate of most of the current theories. He trusts also that Professor Phelps has succeeded in the somewhat difficult task of rendering such essays as these into neat and readable English, and that his labor may be rewarded by the consciousness that he has contributed somewhat to the progress of solid and scientific thinking at a time when such thinking is greatly needed and always respected, even though it may not always be loudly cried in the market-place.

NOAH PORTER.

YALE COLLEGE, *January*, 1880.

AUTHOR'S PREFACE.

THE concepts which enter into our thoughts and actions are the outgrowth of a definite relation which we hold to the interests and problems of our time. They show with what problems we are occupied, and how we treat these problems. A consideration of the concepts of an individual, a school, or a time, must then give us an explanation of what is striven after, and what is accomplished. A criticism of concepts must become a criticism of the entire contents of the conscious intellectual life of the man, or the school, or the period.

This task, however, can not well be undertaken without attempting also to understand these concepts in their historical formation and their historical association; since only in that way is it possible to carry back to its sources and fundamental principles that which is given us in its present developed form. And, indeed, the concatenation of things carries us a step farther, so that we must pay a certain amount of attention also to the clothing of the concept, that is, to its verbal ex-

pression, since we can hope to obtain a just estimate of a concept only when we understand clearly the relation between its signification and its present form of phraseology.

In attempting to establish such a consideration of the questions of our day, we should expect to meet with difficulties in the method of execution, rather than with scruples as to the undertaking itself.

First of all, we limit the problem in a way which is perfectly practicable. We do not propose to discuss the concepts which now are most prominent in what is specifically philosophical, or technically scientific; but those, rather, which, proceeding from philosophy and the general scientific development, have become a power in life as a whole. The subject of our investigation will be, not the concepts of the philosophy of to-day, but the philosophical concepts of to-day. By to-day, however, we understand the last decade, as it is limited by the reaction against the Constructive and generally systematic philosophy, and, further, by the preponderating influence of the natural sciences. In so doing, we have specially in view the development in the German thought-world; but believe that we can from that obtain also a judgment which shall extend far outside, since the specific tendencies of modern science are nowhere so distinctly manifested as they are among the Germans.

But how many considerations and questions arise, if the method of our investigation is to be still further

justified! What are the measuring tendencies of our day, and within what limits do individual forces unite, in the highest degree, in a joint action that is historical? Which concepts are to be considered as therein the leading ones? How extensive, or how limited, should be our consideration of them? In short, so many questions arise, that, to answer them in any measure, we should have to discuss at the outset our method of discussion. Instead of this, we much prefer to plunge at once into our subject, and run the risk that some topic may be thought missing here, or superfluous there, and that, everywhere, we may be accused of a certain arbitrariness in our choice and treatment of material.

Only, we ought to be allowed to vindicate ourselves in this respect: if isolated sections seem to stand in unconnected sequence, we do not thereby renounce all claim to a logical progress in the discussion. There need be no lack of unity in the whole, because one proceeds from many isolated points. But we would further beg to be allowed to make no claims for the following discussions which they are not intended to satisfy. Choosing, as they do, for their object a province which lies between science and common life, they must necessarily maintain a certain middle ground in their form; what is specifically technical must be kept, as far as possible, in the background.

It is then involved in the whole nature of the task, that the philosophical investigation which is here undertaken can, emphatically, lead only to negative results.

The principle is essentially involved in the investigation itself, that a positive treatment of concepts can be usefully given only in connection with a systematic philosophy; and, for that reason, we have abstained from even occasionally entering upon such discussion, although greatly tempted to do so. We may be blamed for our limitation of the discussion; but we make no pretensions of passing into what is excluded by that limitation. We will not shun the positive side of the work; but, for the present discussion, we beg the favor of the Platonic expression: *πάντα ταῦτα προοιμιά ἐστιν αὐτοῦ τοῦ νόμου ὃν δεῖ μαθεῖν*.

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THE FUNDAMENTAL CONCEPTS.

SUBJECTIVE—OBJECTIVE.

Συντέτακται ὅτι μὴ ἐπεισῶδιον τὸ σὸν τῷ παντί.—PLOTINUS.

THE history of the expressions shows the development which the concepts "subjective" and "objective" have undergone in modern philosophy. In the course of the centuries, they have simply interchanged meanings. In Duns Scotus, who was the first to use them in their present antithesis,* *subjectivum* signifies that which refers to the subject of the judgments, and so to the concrete objects of thought; *objectivum*, on the contrary, signifies that which lies in the pure *objicere*, that is, in the act of making ideal, and so is assigned to the perceiving mind. (See Prantl, "History of Logic in the West," iii. 208.)

In this sense, the expressions remained unchanged until the commencement of modern philosophy. In the controversy between Descartes and Gassendi, subjective is used synonymously with *formaliter in se ipsis*, and objective with *idealiter in intellectu*. More commonly, to be sure, the antithesis was between objective and *formaliter*, which was still undisputed in the first half of the eighteenth century. Toward the end of

* According to Prantl ("History of Logic," i. 581), *subjectivus* in a purely logical signification occurs in the works of Appuleius.

Scholasticism a certain vacillation appeared in isolated instances, and this increased in proportion to the entrance of modern thought. In that which was called objective, things cut themselves loose from thought and gained an independent existence. By subject, however, the thinking mind began to be understood, instead of the logical concept. (See, for example, Leibnitz, Erdmann's ed., 645 b, "*Subjectum* ou l'âme même.")

The change of meaning, however, toward which this tended, was not completed until the expressions passed over into the German language. I find the first examples of the new meaning in 1730. For example: in the "Introduction to Philosophical Science," by A. F. Müller (1733), ii. 63, *objectivum* is explained as "in itself and outside of the understanding"; *formale*, as "in the understanding." With A. Baumgarten the new usage seems already to predominate; while Crusius, Lambert, and Tetens employ the terms just as we do.* But the way in which they were employed in the controversy between Lessing and Götze† shows plainly that they were still used as thoroughly scholastic terms; so that we can say that they first entered upon their common use with Kant.

The new signification spread especially to France, and then to England. In the latter country, although the application of many terms customary in the middle ages had penetrated into the living language,‡ this new

* But Crusius and Tetens usually said *subjectivisch* and *objectivisch*.

† The distinction which Götze made between the subjective and objective consideration of Faith can be traced back to Baumgarten, "German Metaphysics," § 738.

‡ See, for example, Berkeley (Frazer's ed., ii. 477): "Natural phenomena are only natural appearances. They are, therefore, such as we see and perceive them. Their real and objective natures are therefore the same."

usage was for a long time felt to be strange and scholastic.

The concepts are, of course, older than the expressions. But, if we follow their history backward, from the culmination of the middle ages, we must search for a long time before we find them distinctly formulated. In the first half of the middle ages, as among the earlier Romans, we find only circumlocutions;* but no determinate significations, until we reach the later Greek antiquity. When the Stoics and others place in contrast ἐπινοεῖσθαι and ὑπάρχειν, κατ' ἐπίνοιαν and κατ' ὑπόστασιν (ὑπαρξιν), they express the same antithesis that is contained in our subjective and objective; and the disputes which arose over the concepts signified by the terms are very similar to those of later times.

But the concepts themselves extend beyond these expressions; they are numbered among those which, although in different degrees of clearness, must be present in every philosophical system. As the object of our thought is to obtain a knowledge of nature in determinate content, and this content can be obtained only by labor and struggle, we must make obvious everywhere, where we suppose an act of knowledge, the distinction between that knowledge which is, at least for us, absolutely valid and that which is only empirical: to the individual. But, as a matter of fact, the comprehension of this distinction will ever vary, according to one's theories of knowledge. The Skeptic, for example, can not avoid distinguishing in phenomena that which is

* So, to adduce only one illustration, Scotus Erigena gives as the antithesis, "De Divisione Naturæ," 528 a: *in nostra contemplatione—in ipsa rerum natura*; 492 d: *dum in se ipsis naturaliter perspicuntur—in ipso solo rationis intuitu*; 493 d: *in rebus naturalibus—sola ratione*.

common from that which is purely individual;* and the constructive philosopher, who would constitute the whole world out of thought, will be discreet enough not to confuse the necessary processes and results of thought with the impressions or fancies that vary with the experience of the individual.

But, to the common sense of men, the question involved in this problem is that of the relation of thought to a world which is independent of it; and, inasmuch as this view is uniformly the ruling one with the masses of mankind, we can assume that the concepts subjective and objective have no significant meaning to the common consciousness, until a chasm is opened between the thought-world and the real world. This again depends, in the great life of the whole, on the general view taken of the position of mankind in the world. The more closely a man believes himself to be bound up in the life of the whole, the more he regards himself as its culmination, so much the more will he be convinced that, in the act of knowledge, he seizes the essence of things; and, conversely, every doubt in respect to the former belief will be accompanied by a vacillation in the latter. In this way, the contest over objectivity and subjectivity not only reflects the shifting relation of thought and being, but also expresses the entire estimate made of the meaning of the life of man.

Thus the Stoical distinction between the objective and the subjective in knowledge is only the consequence of a change in the view of man's position in

* Sextus Empiricus, *πρὸς λογ.*, ii. 8: οἱ περὶ τὸν Αἰνησιδῆμον λέγουσι τινα τῶν φαινομένων διαφοράν, καὶ φασὶ τούτων τὰ μὲν κοινῶς πᾶσι φαίνεσθαι τὰ δὲ ἰδίως τινί, ὧν ἀληθῆ μὲν εἶναι τὰ κοινῶς πᾶσι φαινόμενα, ψευδῆ δὲ τὰ μὴ τοιαῦτα.

relation to the world ; which change came in with the most flourishing period of ancient thought ; and from that time, in the development of history, the conflict became more and more violent, and the sense of it had ever greater power over the consciousness of man, until at last all pleasure in life and in action was destroyed.

Then we find Plotinus making the bold attempt to restore the connection between the world and the mind, by making Being the product of creative thought. But the world at which he arrived by that means was not, even to himself, that which is present to the senses, but something supra-mundane ; and, if his doctrine amounts ultimately simply to this, that all our knowledge arrives only at a likeness (an *οἶον*) of truth, it must be admitted that the chasm which seemed to be overcome will open again in some other place.

Not till we reach Christianity, where life receives anew a concrete meaning through its ethical-religious definition, does mind, in its connection with the whole, obtain again a firm confidence in itself and its responsibilities.

But now other dangers at once stepped in. The conviction that man's ethical life is essentially the object of all that happens in the world, and controls the destinies of the universe, led to the reference of everything directly to that life, and to the interpretation of the whole plan of the world, with reference to the considerations and postulates involved in the practical life of man.

The serious consequences of such an endeavor appear already in the system of Augustine. Revealing as it does an astonishing knowledge of human nature, everything in it is so shaped as to bring out the greatest possible exertion of forces for ethical-religious—

often, in fact, only for churchly—aims; and, in so doing, the human is unreservedly found in the universal; purely psychical occurrences are projected outside of the mind; wishes change into facts, presentiments into certainties.

The later thinkers, lacking Augustine's theoretical interest and speculative power, went carelessly to a greater extreme in this dangerous direction; and to it there was no effective counterweight in the Aristotelian philosophy, which was finally adopted, to supplement this cosmology. For there has never been a great thinker who was so absolutely convinced as was Aristotle of the connection of the human life with the events of the world, and thus of the objectivity of our knowledge. No one, therefore, had less hesitation in carrying over into the physical universe without ceremony the peculiarities of psychical beings. A soul was implanted in all things: every event was explained as resulting from an endeavor: qualitative distinctions and oppositions took possession of all nature: a good and an evil, a normal and an anomalous, a natural and a violent appeared everywhere distinguished, and in hostility rent asunder every natural bond. In this way, every variety of being became a mere copy of human life. Wherever man looked, he found himself; and, accordingly, however far the investigation might extend, he remained everywhere shut up in a closed circle, and hemmed in by a limitation which must have appeared far more oppressive than the narrow bounds of the world's physical horizon, which seem to us to be peculiarly characteristic of those times.

The modern interpretation of the universe was directly opposed to this. Knowledge and action contained a fuller meaning; and mankind, tearing off the

limitations of the past, sought to extend its own life into the infinite. That which was specifically human appeared to be everywhere too small. It was the custom rather to seek the explanation of man in the world, than to seek the explanation of the world in man. In order to obtain an "interpretation" of nature, in place of an "anticipation," all concepts must be transformed. Everything was hereafter to be measured by the known universe, and the meaning of human existence was to be recognized only in so far as it gave expression to the general order.*

If, however, the universe is to make itself known to the mind, and is to disclose the soul of nature, that must leave behind it all that is arbitrary and fantastic, and submit itself to the great laws of the whole; but this is to be done only that, through knowledge, elevation above the universe and supreme control over it may be reached. What was lost to the mind from its presumed possessions seemed evanescent in comparison with that which was to be won; to realize an end so high, it became worth while for man to exert his strength to the utmost. When this happened to succeed, modern science built itself up, the powers of man were broadened, and life itself was transformed.

To oppose such a tendency, after the position of man in relation to the world had been radically changed,

* Bacon, "Parasceve ad Historiam Naturalem," aphor. iv.: "In historia quam requirimus et animo destinamus, ante omnia videndum est, ut late pateat et facta sit ad mensuram universi. Neque enim arctandus est mundus ad angustias intellectus (quod adhuc factum est) sed expandendus intellectus et laxandus ad mundi imaginem recipiendam, qualis invenitur." Spinoza, "Tract. theol. pol.," chap. xvi. 10: "Natura non legibus humanæ rationis, quæ non nisi hominum verum utile et conservationem intendunt, intercluditur, sed infinitis aliis, quæ totius naturæ, cujus homo particula est, æternum ordinem respiciunt."

was to attack modern science, and the culture which resulted from it. But we need not do this, in order to recognize the fact that this revolution produced a commotion, which necessarily introduced at the outset perplexity and discord into the entire apprehension of the problem.

First of all, the mechanical natural philosophy established with perfect clearness the distinction between the qualities which phenomena offer to scientific thought, and those which they offer to common-sense perception. What Democritus had already substantially affirmed now found exact confirmation in Descartes. Even before the investigation of nature had achieved important results, the interpretation of the specific qualities of things was limited to their effects upon the sentient soul, and ultimately only masses and movements remained.*

When in this way it was found that we to a great extent create the very world itself, which seems to be opposed to us as something objective, not only was our faith shaken in the truth of all that is in general present to consciousness, but even the substance of the mental life seemed to be cut off from the world.

Moreover, the mental life itself was made the subject of criticism. Here, too, it was customary to discriminate between facts and interpretations, between real and imaginary powers, in order thus to advance to pervading laws, which might render possible a control over the motive power of the soul through the knowledge of its hidden springs.

But, though the most prominent thinkers attacked in their theories only what was superficial, in order to

* Boyle and not Locke was the first to apply the scholastic phrase "primary and secondary qualities" to the new distinction.

make room for the free action of that which they thought was essential, in the common life the doubt, once excited, went beyond this. Pragmatic psychologists showed how much the picture which a man draws of himself differs from what he really is. A man like Pierre Bayle endeavored to show how essentially unimportant those attempts are which we like to consider as the most important; how little expression of actual conviction there is, even in those propositions which are defended in good faith. He was the first to make use of the phrase, which since then has been repeated to satiety, that "men only believe that they believe.* Similar endeavors were made by other men, especially in France, who were in like manner repelled from a comprehensive knowledge of the whole by their keen analysis of the individual. The chasm between the immediate percept and that which was supposed to be really existent became continually greater. The purely natural instincts appeared to become more and more established, as all there was to real existence; and these were little fitted to entitle the mind to any kind of a prominent position in the universe. Even the opponents of such a tendency seemed to be seized with doubt, and were therefore poorly qualified to offer successful opposition.†

To investigate anew the position of mind in the universe was unquestionably the problem of philosophy;

* See the article "Socinius," which, in the discussion of the present question, is emphatically worthy of consideration. In the eighteenth century Lichtenberg, apparently independently of Bayle, defended the same sentiment. See "Miscellaneous Writings," i. 158.

† Pascal, "Pensées," art. xxv., 46: "L'un dit que mon sentiment est fantaisie; l'autre que sa fantaisie est sentiment. Il faudrait avoir une règle. La raison s'offre; mais elle est pliable à tous sens, et ainsi il n'y en a point."

but here we see the systems differ from the outset, and diverge even to antagonism. Bacon, throughout whose system nature determines the formation of the universe, shows an inclination to consider what is specifically mental as something which lies outside of material events. In some degree related to this, we see later English thinkers studious to treat the province of the mind as self-contained, and relatively independent of the material world. One renounces here the connection with the whole, so as not to endanger what is specifically mental in its own sphere.

The speculative thinkers on the Continent went beyond such a limitation. Spinoza and Leibnitz, above all, believed that they had no right to renounce a close union between the mind and the material world. But with Spinoza there is a vast difference between intention and execution. From the beginning he wishes surely to guarantee to the mind, as an attribute of the infinite substance, both significance and permanence; but when, in the actual development of his system, he derives all its meaning from that which is outside of it, and ascribes reality to its life only in so far as it reflects the external, he is compelled to oppose as phantoms all forms of life peculiar to it, such as estimates of value, designs, etc., and to degrade it finally to a pure form. Spinoza's mental world is nothing more than that part of the material universe which is brought into consciousness; the soul is matter regarded as an idea; and thus, in this pretended reconciliation, the one is sacrificed to the other.

Leibnitz saw this clearly, and tried to evade the difficulty in another way. He found his solution in the principle that all heterogeneity in the world is ultimately resolved, in different grades, into one and the

same power, and hence from each unit we can form a concept of the whole. If, then, the mind occupies such a position in the gradation of existence, we can understand all other existence from it, provided we investigate its essence; and, at the same time, it can itself be justified as a specific existence. It finds itself again everywhere in the world, and can in thought reestablish the closest connection between itself and the universe. But, to accomplish this, in fact, we must strip off everything that is specific, and so we lose in content what we gain in extent. Leibnitz's essential force, the idea, is in truth no longer a psychological concept; it has become ontological (union of plurality in unity); and so here, too, what is specifically mental is ultimately sacrificed to the whole.

When we see the most prominent thinkers placed in a dilemma where they must either isolate mind or else abandon its peculiar properties, we are not surprised to find that the chasm was only widened by the attempt to bridge it over, and that the problem became more complicated, until, in the hands of Kant, the discussion took a new turn. He brought out more clearly than any one else had done the antithesis between subjective and objective. He established everywhere fixed criteria by which to distinguish the two; and he made it seem so evident that this distinction was the leading problem of philosophy, that the whole discussion, which up to that time had been preponderatingly either metaphysical or psychological, was now very properly directed toward the doctrine of knowledge. Not improperly did Lichtenberg suppose that to determine the relations between the Subjective and the Objective was to think in the Kantian spirit.*

* See "Miscellaneous Writings," i. 101.

But it is well known how little this peculiarly positive attempt at solution accomplished. Even in the decisive questions a divergence of opinion arose, which could not be repressed. If mind was once completely shut off from the world, with no means of pressing out into it beyond its own narrow circle, then, on the other hand, it came to the world with its own limitations, and produced out of itself a peculiar kingdom. What was taken away by one hand was given back by the other; and so, according as one started from the Theoretical or from the Practical Reason, he found himself led to wholly opposite estimates of the material universe. The endeavor to overcome this antithesis was the motive of further discussion. The Constructive thinkers wished to adjudicate to the reason in general the rights before held by the practical reason, and thus to allow all being to spring from it. But in that case the reason must naturally be conceived not as empirical and individual (subjective), but as absolute and universal (objective);* and this view is in fact often rendered prominent by them. But they passed very lightly over the question as to how we can arrive at such a concept, and secure it against disturbance and assault. In place of the thoughtful analysis of the earlier writers, we find here bold leaps, a "free flight" of thought, which might produce ingenious performances here and there, but which could not prevent what is contingently empirical from mixing itself in with the pure forms of thought, and could not restrain the introduction into the concept of the material world of what is specifically human.

It was an inevitable result that such an attempt to

* Jacobi used the expression "objective reason." See "David Hume," p. 194.

solve the great problem should be followed by a sudden revulsion; and with that we come to the present day, the situation of which is easily understood from this historical development. We see a problem very important in its bearing upon the entire thought-life of our day—in fact, a decisive problem—reduced to its simplest terms, and thus intensified almost beyond endurance. A comprehensive solution is courageously undertaken; and it endeavors to gain an influence in all departments of thought. But the catastrophe enters suddenly. That the endeavor is one-sided, unsatisfactory, and defective, is rather felt in its consequences than shown in its principles. But the counter-movement is sanctioned by the whole work done in the exact sciences; it seems to find a philosophical basis in the criticism of the pure Reason; and—what is more significant than all—it is supported by that practical common sense, to which the chasm between mind and the material world, in spite of all the labor of philosophers and others to the contrary, has always increased in width.

There are thus many causes, permanent and temporary, which favor that tendency of thought which would cut man's knowledge and life loose from the material universe, and which regards it, therefore, as one of the prime objects of scientific investigation to make conspicuous, everywhere, the antithesis between subjective and objective. Our modern use of terms shows what heterogeneous elements are brought together in this tendency. At the outset, subjective and objective express plainly enough a relation between the act of perception and the object perceived. But soon some one understands by it the position of the single individual in relation to the entire mass of persons judging;

and then the relation of the specifically human view of the world to the real nature of things; and, finally, the relation of thought to being in general.

Then, however—and this is peculiarly characteristic—the use of the terms is so extended that all that is in general assumed in a spiritual being is set down as subjective: and then one is everywhere inclined without further ceremony to substitute the subjective for the imaginary, and the objective for the real.

The different significations thus play into one another in many ways; so that, even in the following discussion, it will be occasionally necessary to bear in mind the narrower signification of the terms. This discussion, however, will not investigate in any way, from the positive side, the question as presented; since such a discussion can be undertaken only in connection with a systematically philosophical investigation. It aims only to glance critically at the views of the subject which predominate to-day; and especially to raise the question whether that which is set down sometimes as self-evident, sometimes as being the valuable result of modern investigation, is not often, after all, only an inference from very doubtful and dogmatic suppositions.

First of all, subjectivism attacks the possibility of any kind of certain and adequate knowledge. Since, as it claims, we remain always and for ever, no matter what we may undertake, shut up in the narrow circle of our own ideas, and we can not possibly put ourselves into a position where we can compare the subject and the object, it follows that we are once for all shut off from any knowledge of real things, whether they lie outside of us or within us. Even the shades of Kant are conjured up to defend this proposition, as if we could not derive such an opinion from the

early Sophists,* or find it shrewdly and effectively defended by Sextus, the Empiricist. Not that Kant asserted the proposition; but its significance is found in the way in which he laid the foundation for it, and carried it through, and supplemented it, as involved in the development of his system. But what was for him only an element in the whole, and by no means the point at which he finally stopped, is now esteemed the final result of philosophy and the sum of all wisdom. And yet this whole doctrine rests simply upon an interpretation of the conception of truth which is dogmatic, and, for modern philosophy, emphatically unscientific. It supposes truth to be the harmony of the thought concerned in the act of knowledge with objects which can be present independently of that thought. Knowledge is supposed to come by the reflection of what lies outside of the mind, which furnishes no means of determining how far the mirrored picture is an accurate one.

Here the question at once arises, by what means thought in general arrives at the supposition of an existence independent of it. Surely, if we do not wish to appeal simply to the material world, as given in the percept of common sense, the supposition must arise from elements found in thought itself and its activity; and, if we adopt this position, the definition of truth as just explained is rendered worthless.

The study of the history of the definition shows, too, that it belongs to that period in which thought had not worked its way to an independence of the ideas of the world as given by the psychical mechanism. It underlies the entire system of Aristotle; and at any time

* Gorgias (see Mullach, Frg. 16): τὸ μὲν εἶναι ἀφανές, μὴ τυχόν τοῦ δοκεῖν· τὸ δὲ δοκεῖν ἄσθενές, μὴ τυχόν τοῦ εἶναι.

it may, by the decline of thought, steal back again into scientific discussion. Yet, even with the Neo-Platonists, still more with the more distinguished thinkers of the middle ages, and specially with all the prominent systematic philosophers of modern times, it is considered a settled doctrine that knowledge is to be regarded, not as a pure reception and reflection, but as an inner activity.* There may be divergent opinions on this point. Some may consider the material universe as coöperating with this activity, and furnishing elements of its own, as a suggestive force; others, on the contrary, may treat the material world simply as a production of thought. But it is a common principle of all those who maintain the idea of an independent task for philosophy, that in the discussion of knowledge the question deals with that which is internal, and that, for this reason, the criteria of knowledge are to be found in thought itself.

German Idealism, culminating in Hegel, has carried out to its full development the principle that the entire antithesis of subject and object arises originally in the thinking activity, and that we are compelled to postulate a world in antithesis to the thinking subject, not by any power perceived by the senses, and forcing itself in from the outside, nor by any necessity set over against thought, but simply by the nature of thought itself.

Skepticism, which is opposed to this, finds itself in an untenable position, midway between the material world of common sense and the world of a systematic, scientific philosophy. Common sense furnishes it the principle that the knowing mind cognizes an existence independent of itself, which is not subject to its control; but the development of science has brought out

* Duns Scotus, the most distinguished thinker of the middle ages, called knowledge an "actus immanens."

clearly the antithesis of subject and object; and so the problem of the objectivity of knowledge, which had been previously investigated as one of the questions involved in the nature of the thinking activity, is now taken up and discussed by itself, as a supplementary question. We are not surprised that the answer of skepticism is all that can be given, if knowledge is made entirely dependent upon that which is external. In that case we see only what we have read into external objects.

This confusion of theories of the world, as viewed from these two different standpoints, has penetrated, as well, into the individual concepts, and has introduced perplexity even where, as a matter of principle, skepticism would be rejected. The concept of the phenomenon is taken to express simply the objects of thought without any estimate of their metaphysical worth; but it is used also to denote the ideas which are produced in us by things lying outside of us, and so becomes the instrument of a specific and thoroughly dogmatic theory of the relation of the mind to the material world. If even men like Kant and Herbart have allowed themselves to be led into fallacies by this ambiguity, we can not be surprised at the various errors of the present day. Many an investigator transforms the world given through the senses into an ideal one. But he forgets that the original apprehension is destroyed, just in proportion to the progress of this transformation. The world given by the senses remains as actually existent, by the side of the one furnished by scientific philosophy; and so we have two worlds, when in fact we are discussing only two different ways, or perhaps grades, of apprehending one and the same world. But, for the doubt which will nowhere place any confidence in the activity of

thought, we must blame the work of science itself, which alone can relieve this doubt. In any case, we should not allow ourselves to be brought, through dogmatic suppositions and confused concepts, to those vague doubts which no arguments can overcome—for the very good reason that they are founded upon no arguments.

But here arises, ultimately, the theoretical doubt involving the uncertainty of man's position in relation to the universe in general; and we are thus compelled to examine a little more closely the particular points which come under consideration.

First of all, our idea of the specific nature of the external world as subjective is valid, in the sense that it possesses no reality beyond the inner life of man. When the scientist, as we saw, draws a sharp distinction between that appearance which is the result of our specific organization and that which offers itself to scientific investigation as the last point reached in the analysis, the result is that only masses and movements constitute the objective world, while everything else belongs to the sphere of the subject. The philosopher, to be consistent, is compelled to remember that what the scientist thus regards as an objective world comes as well as the rest under the common conditions of the mind's comprehension, and hence, for philosophy, needs a new examination.

Matter and motion, as well as secondary qualities, presuppose thought-activity, and can not therefore be set over against the mind as the final essence of things. The objective world of the scientist is, accordingly, to the philosopher only a determinate system of phenomena which are distinguished by the quality of persistence, but which are always dependent upon the mind, and therefore, like everything else, relative to it. The dif-

ference between such phenomena as these and the secondary qualities is, to be sure, a great one. Moreover, we must not forget that even our very capacity for sensation is itself a part of the world, and stands in causal connection with the whole, and that for this reason there is something in it which, as a legitimate occurrence, should not be set aside as imaginary. Yet, aside from this, as one man may reason from this difference between the phenomena of matter and motion and those of the secondary qualities to the conclusion that consciousness is shut off from the material world, another can conclude that, in ultimate analysis, the essence of things must be determined to be something different from its presentation in moved masses; and so we arrive at wholly different results, according to the connection into which the data are brought.

This doubt penetrates still more deeply into our theory of the processes which are specifically spiritual. Here the concealed phenomena find no external support; a strictly scientific analysis of them seems to be excluded by their anomalous heterogeneity, which gives what appears to be a simple series of disconnected productions; and so the whole thought-realm is explained as subjective, in the sense that in it there can be only individual opinions, and not acts of knowledge of universal validity. There is certainly an obvious distinction between these phenomena and those of the external world. Yet the question arises, whether such a negative judgment of them does not really have its foundation in the fact that, in spite of what is involved in the judgment, purely psychical phenomena are estimated by a standard which has been verified only in its application to physical phenomena. Particular phenomena are often taken up just as they originally pre-

sent themselves, and are thrown together in a heap; and then men expect that a law will spontaneously spring forth, and the scattered parts will suddenly combine into a whole. But, as a matter of fact, the distinctions remain, and develop into contradictions. We find divergent tendencies. Theories formed at different times lack connection; and, on the supposition that, in view of all this, no general fundamental principles can be discovered, judgment is passed upon the whole just as it is presented. But it is not valid reasoning to reject a thing because we can not receive it in the precise form in which it is originally presented. If, in the province of natural science, phenomena must be transformed before they are in proper condition for scientific investigation, it is even more true of the mind that its phenomena, as originally given, are often only a remote and transformed consequence of the reality behind.

There are, to be sure, differences between these two kinds of phenomena. In mental phenomena the relation of the individual to the whole is different from what it is in physical phenomena. The individual has a far greater independence, and so can not be conceived simply as an expression of the whole, and with proportionate ease be formulated under a comprehensive law: no more, however, can the individual be treated in itself alone, since it is always found in combinations, and is suggestive of a connection with the whole.

From such a condition of things problems arise which seem almost to demand an artistic as well as a scientific efficiency of treatment. It results from this that in thought-action we have, not a system of uniformly persistent forces, but a becoming, and a self-formation in the act of becoming. If single phenomena

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can not be adjusted to one another, a chaos is inevitable; but, as soon as the investigation is directed toward the impelling forces and their inner connections, harmonious boundaries and comprehensive essential forms can easily be established above all differences; progressive formations can be recognized in apparently lawless events; the divergent tendencies are seen to approach in their development, and even that which is apparently antagonistic will not resist the process of reduction to its proper place in the general system.

If, for example, in the province of ethics, phenomena torn off in isolation are brought together, it is easy to establish contradictions, and so to prove the contingency of moral endeavors, judgments, and sensations in general. Yet it is surely an established fact that, in general, such activities actually exist; and, before we discuss the "what," we must recognize the "that." But, then, the meaning of peculiar cases will cease to be unintelligible, so far as the individual is made a part of the whole, and the temporary form finds its justification in the entire historical development. The difficulty of the problem may in this way allow more room for the play of arbitrariness in the solution of it by the individual, but such an uncertainty is not caused primarily by the thing itself, but by our relation to it, and should not be allowed to prejudice our estimate of it.* But if we should question the possibility of an objective scientific knowledge in all cases where there can be a difference of opinions, and resign the field to a subjective arbitrariness wherever no law is revealed at the first glance, in that case we prejudge most em-

* See Leibnitz, 314 a: "Notre incertitude ne fait rien à la nature des choses."

phatically every scientific problem.* It would be a natural result that whole realms of great importance would be withdrawn from the sphere of scientific knowledge—a result which would be as convenient for the individuals as it is dangerous for the matter involved. To reject nothing should be the first principle of all investigation.

It is still more postposterous to introduce into science itself, as permanent limitations, the contradictions incident to our treatment of it; and also to slight whole sciences as “subjective,” because at the outset opinions and theories diverge on account of the difficulty of the problem, and the dependence of our judgment of the individual case upon the investigation of the whole. It is certainly very advantageous to be able to treat certain provinces of science without taking into consideration the ultimate questions involved; yet it is advantageous only in so far as such sciences are taken in detail, and considered out of relation to the knowledge of the whole. But, as soon as we go beyond this, that which is peculiar in each becomes involved in the fate of the whole; and especially if philosophy, as the science which lies beneath all others, is endangered, it must react on the value of the results of every special science. To extol the trustworthiness of single sciences, as opposed to philosophy, is thus seen to be essentially a renunciation of the prerogative of knowledge as involved in science itself; and the delight in such an objectivity proceeds from a conception of it

* See Kepler, “Opera,” i. 243: “Si absurdum et falsum id censeri debet, quod uni alicui hominum coctui tale videtur, nihil erit in tota physiologia, quod non pro crassissimo absurdo haberi debet. Variæ sunt hominum sententiæ, varii captus ingeniorum. Quid autem ex his verum sit, quid falsum, penes vere philosophum est decernere.”

which may perhaps be suited to a day-laborer, but certainly not to an architect. In brief, we must reject the distinction between objective and subjective sciences. There are, to be sure, different methods and different grades of certainty in knowledge; we can set each individual science off for consideration by itself; but ultimately the contest over truth is a general one, and so the danger involved in this contest becomes general also.

The decisive problem, however, the one which essentially includes the preceding ones, is that of the reality and the significance of spiritual processes in general. The doubt which finds its expression in the other problems has its origin in this. Now, if we set aside the utterly crude materialism as a doctrine lying altogether beyond and outside of all philosophical investigation, we find that the independent existence of mind is called in question, in modern times, specially by two schools of thought. The one of these is based upon the natural sciences, and starts with Bacon; while the other is philosophical, and appeals to Spinoza for support. The partisans of the former take up their standpoint in nature, the investigation of which occupies all their attention. They judge mind to be something which lies outside of the realm of science, and should therefore be let alone; and then, before long, they judge it to be unsubstantial and of no account. The whole specific meaning of the thought-process is degraded to a species of illusion. It often seems as if we were to believe that ingenious law-givers, and theorists inclined to spiritualistic interpretations, had invented the whole province of apparently independent thought-activity, and had succeeded in convincing others of the reality of their invention.

But such opinions can be held only where the nature of the world and the philosophy of natural science are

regarded as simply synonymous. Whenever a more extended view is taken of the realm of science, that which is specifically mental must be recognized as something which belongs to the world. For if a phenomenon occurs in the mind, it also occurs in the universe, and by that fact is protected against a simply dogmatic rejection. No matter what conception one forms of the world, as soon as he earnestly considers the thought of a comprehensive causal connection, mind must form a part in the structure of the whole, and, as interpreted, must be included in its working. Even if it were to be regarded only as a production of physical forces, it can not stand out, as such, suddenly and immediately, like a *deus ex machina*; but the elementary forces must be so conceived, according to their general nature, that this ultimate result is seen to be eventually possible. It is, strictly, a mistake in methodology to form the ideas of the world, first of all, out of the non-mental, and then, by way of addition, to interpolate mind as an unrelated fragment. For, as Aristotle rightly remarked, the universe is not divided into episodes, like a poor tragedy; and the responsibility for the denial of the reality of the thought-process, the motive of which is explained in this way, rests entirely upon the observer, who forms concepts too narrow to embrace the whole, and who has not the faculty of holding firmly, in an investigation, to the idea of a comprehensive causal connection.

The philosophical tendency, however, which leads to the questioning of the independence of what is specifically mental, attained its culmination in Spinoza. We have already seen how far removed from him such a tendency was at the outset; but his speculative thought was not powerful enough to achieve its own design; and the action of the materialistic propositions which are

ultimately decisive is all the greater, as one believes that, in accordance with his suppositions, the philosophical problem is solved.

As soon as a point is reached where the mind is nothing else than the consciousness of an existence lying outside of it, and independent of it, it is divested of all substantial meaning. If, indeed, all of its processes contain reality and value only through their relation to what is external, everything that forms its independent existence is condemned as illusion. To ascribe anything to spiritual essence signifies the declaring it to be a phantom; and in like manner, in rigid consistency, all specific forms of thought-action, estimates of value, designs, etc., are banished from the actual world as delusions.*

This doctrine, which at first was vehemently rejected,† but afterward commended in its idealizing interpretation, has now become the conviction of a large number of men—though without the limitations which it always received from Spinoza, and without the speculative reason on which he based it. Not a few scientists consider that this is the only possible way of recognizing mind, without endangering an exact and causal comprehension of the material world. But there is at the basis of this whole doctrine a *πρώτον ψεύδος*, viz., the interpretation of the meaning of the mind itself, that is, the interpretation which makes mind and consciousness identical. Whether the relation of consciousness to external

* Spinoza's error, regarded as a pure concept, and viewed in its connection with his system, lay in the fact that he referred mind, as consciousness, not to the absolute substance, as was demanded by his first principles, but to the material world, and so substituted this for the infinite existence.

† And this, not only by zealous theologians, but also by such men as Leibnitz and Bayle.

objects, as assumed by Spinoza, may not conceal inner contradictions, is not a question we need discuss here. The fact is enough for us, that the powers of mind are not exhausted in a mere consciousness of external things, but that it creates an inner world, an independent existence (*Fürsichsein*) for itself, in which consciousness first makes its appearance and obtains significance. Those forms of thought-activity which Spinoza opposed do not belong merely to consciousness, and still less to mere reflection; but they penetrate the entire being, and are, in this essential form, thoroughly independent of any strife of opinions. It was not a reflecting brain which first invented estimates of value and designs; but, from the very beginning, these rule human life, and show that they exert a power far beyond mere reflection in all that pertains to the soul. Reflection and error are only the particular formations which these essential elements assume in the conscious life. Here the criticism of the philosopher can take possession, and find rich material to work upon. But the fact that fallacies, frauds, and encroachments are of frequent occurrence here does not in the least justify us in rejecting these essential elements themselves.

We must therefore make a more exact distinction than is usually made between consciousness and reflection. Reflection is that which has to deal, in a peculiar sense, with what is in many ways mediate and dependent, and so is continually involved in errors and exposed to doubts and assaults. The strife of parties reaches just as far as the reflecting judgment reaches; and here, where the question is one of opinions and interpretations, science must certainly explain as subjective imagery much of the reality of which the ordinary common sense of men is fully convinced. But such doubts

and contests affect only what is superficial: they do not reach the depths of the thought-process, and even that, which, in the form in which it presents itself to us, can not be retained, should not be thrown away simply as something subjective, but should much rather be traced back to its cause. We are not through with a thing as soon as it is explained as a delusion; for the delusion also demands explanation, and even error points, in ultimate analysis, to something true. Perhaps the ancient Paracelsus is here superior in profundity to many shrewd thinkers of the present day, when he says (Ed. of Huser, ii. 248), "There may also be no shadow, and, so far as there is none, thou hast nothing of the same sun that would then make shadows."

The independent existence of the mind does not need, as soon as recognized, a confirmation from outside that it may serve as real. Only when we make the attempt to unite mind and nature in a systematic cosmology do we take into consideration their reciprocal relation, and the significance of each to the whole.

Such a question, in fact, however little it may be confounded with the preceding one, will not allow itself to be placed in a subordinate position. Many persons have declared, "This is for us thoroughly transcendent, and it is a matter of practical indifference what value our life has to us, since we always remain in the same identical circle"; but, in spite of that, the most distinguished thinkers are plainly always turned, yes, driven back again to this problem by an inner necessity. Since the mind has the universe as the object of its activity, to renounce the explanation of its position in that universe signifies for it nothing else than to doubt the knowledge of itself and its own life; and, the less successful it is in this, the more certainly will

it ever turn back to the problem of the world, to add to its own self-knowledge whatever it may there obtain. In spite of all doubts, the question which Schelling (see "Works," vi. 75) makes prominent will always again arise: "Would the mind strive to fathom this relation (that of man to the universe)? I answer, if it would not, still it must. It always has striven after it; and, in the future, it always will strive after it."

It is therefore impossible to maintain the attempt at mediation which has recently been made, by letting the world of mind stand by the side of the world of nature, without specifying their mutual relations—that is, if this is to be considered a decisive cosmological theory. In this one world thought does not admit two kinds of reality: the one kind will always repress the other; and, since mind, in this case, much more readily suffers disadvantage, and is much more easily etherealized into a purely subjective world, it is the only element which is damaged by such uncertainty and indeterminateness. And even the uncertainty becomes insupportable when it reaches the point where conviction might otherwise awaken powers which are great and ordinarily difficult to excite. Even if we would seek rest in the faith that the world given in thought is a dream, the possibility of a doubt destroys our natural resignation to the illusion. The ideal world, which the phantasy paints as elysium, could comfort us only so long as it serves as a full and complete actuality: as a recognized delusion, it would be man's greatest torment—hence something to be unconditionally removed.

The problem thus allows itself neither to be pushed to one side nor to be evaded; and it is the task of philosophy always to turn back to it again. Our purpose, however, is limited to the attempt to show the prejudices

which stand at the present day in the way of an impartial treatment of the subject. From the first, thought-activity appears unimportant to many, simply because, when measured by its external extension, it seems to disappear when contrasted with the infinite universe. Kepler opposed such a notion, for the very reason that, in an immeasurably extended world, the significance of that which was small externally seemed to him to be especially worthy of admiration; and he held that we ought not to draw conclusions as to the value of anything simply from its bulk.* But, now, the glance into infinity seems to confuse many, and they are inclined to communicate the unavoidable defect of the percept to the things themselves. It is not true that all that is individual and internal is absolutely transitory and worthless, for the reason that, to our glance, the individual disappears before the Infinite, or that we can not measure the worth of the internal as we do the dimensions of time and space. It would be most decidedly a foolish undertaking to compare mind and nature with each other according to their external circumference. Setting aside the question how far we are justified in regarding as a reliable standard the contingent duration of the experience which offers itself to us, the man who, from internal evidence, thinks mind unique, would be only strengthened in this estimate by its rarity. But he who should bring it into a close causal relation with the rest of existence, and should maintain the similarity of nature in all the events in the world, could not refuse to

* Kepler, "Opera," i. 68: "At hercle recreat me non leviter dum perpendo, non tam debere nos mirari ingentem et infinitæ similem ultimi cœli amplitudinem, quam e contra nostrum homuncionum nostræque hujus exilissimæ glebulæ adeoque mobilium omnium exiguitatem. Nempe Deo mundus non est vastus, at nos mundo, me Christo, perquam exigui sumus. Neque ex mole iudicium est de præstantia faciendum."

extend it beyond and beneath the superficial indications of experience. And, setting all that aside, what opinion should we form of a physicist who thought he could take the liberty of ignoring unquestionable phenomena, which happened to contradict his individual hypotheses, because these were of rare occurrence?

A further objection, that mind lacks independent reality, because it appears only in the development of universal history, after going through a process of formation, and vacillating in many ways, has already been met, in part, by the remarks made above concerning the cognizability of spiritual phenomena. It can be added, that it does not in the least follow from its gradual creation that anything is, in the universe, only an incidental result and a transitory phenomenon; because it is still an open question whether it arises in the process as a supplement, or was determined from the beginning, along with the process itself. If we were to predicate of all being, which receives its particular formation only in the progress of universal history, a less degree of reality than that which we give to the unchangeably persistent, we should destroy the whole significance of the world-process and of development; and it would not be the mind only which would be degraded to the position of a fleeting phenomenon.

He, who, in his conception of development, always maintains the characteristics of causality and legitimacy, will be much more inclined to deem that to be peculiarly worthy of consideration which is created later in its processes. .

But, we hear it remarked, mind not only appears at a late date, and in a solitary position, in the world's history; it is also the result of very complicated conditions and of various combinations, and is therefore far

more dependent and changeable than the simple elements which lie at the basis of the compound; and, since it is a valid axiom in science to proceed from the simple to the complex in an explanation, we can in no case make the mind our starting-point in our conception of the world. Yet this whole demonstration rests on the dogmatic assumption that mental activity as it appears in the phenomenon reveals its own intrinsic essence. That activity of course supposes our organization, which must be regarded as very complicated and variably compounded; but we must not, for that reason, in philosophy esteem the mind itself as something composite—that is, the very being which, single and alone among the things accessible to us, possesses an internal unity, and must claim the highest degree of reality whenever it is viewed in the light of philosophy.

If, indeed, as now almost universally happens, the antithesis of lower and higher is to be made the equivalent of that between the simple and the complex, we must regard the higher as the dependent, and derive it from the lower. But even in that judgment there is already the concealed expression of a determinate theory, which, nevertheless, is not self-evident. Empedocles and Democritus may consent to it, but exactly the reverse is held by Platonism, in which the highest stage is formed by the simple, the plainly coined, while the lower seems to be something which is hemmed in, confused, little by little struggling out from pressure into freedom. Here, too, a gradual development can be fully vouchsafed; but in it our concept of the lower would be formed from that of the higher.*

* See, for example, Aristotle, 1252 b, 32: ἡ φύσις τέλος ἐστίν· οἷον γὰρ ἕκαστόν ἐστι τῆς γενέσεως τελεσθείσης, ταύτην φάμεν τὴν φύσιν εἶναι ἐκάστου

Thus we see that the contempt for the existence and activity of thought rests everywhere on assumptions, which, within certain limits and referred to mere phenomena, may have their full justification, but which, so far as they enter with the claim of being decisive facts of philosophical knowledge, are to be rejected as dogmatic presuppositions. That such dogmatic presuppositions should have been able to obtain so great an influence in science is explained in greater part by the fact that, on the other hand, the chief endeavor of modern investigation to form an idea of mind as something cosmic, and of what is human as a part of the universe—that this endeavor, if not given up, still has not been prosecuted with sufficient energy. Even in the contests of science we continually see the idea of the world, which the mind forms in accordance with the tendencies and postulates arising immediately in consciousness, without hesitation presented as a conception of the objective world; while the fact is, that what is thus present in consciousness has usually come into the form in which it offers itself to us only through a varied accommodation and transformation, and therefore needs to be thoroughly worked over before it becomes generally applicable in science, and furnishes a building-stone for the whole.

And, then, the human does not give the measure for the universe. If, from the human as a point of vision, new views of the whole are opened, and a change is to that extent introduced into the entire conception of the universe, still even this supposes an elevation above what is exclusively specific, and so, in theory and in practice, a changed position in relation to the world, as was the case in the experience of the past. The appeal, too, to what are supposed to be practical interests, as opposed

to merely theoretical results, is here often only a device for putting aside unverified ideas as beyond the reach of science. The phenomena of active life must indeed find an explanation and a guarantee within the theory; but this must be done in connection with the whole, and under the common conditions of knowledge. Modern science is unfavorable to all special privileges. Whoever lays claim to anything of this sort, only betrays the weakness of his own position.

It is no part of our present undertaking to explain how much truth has been in the mean time worked out through and in the contest of erroneous theories. This much should be evident from the preceding considerations: that the scientific idea of consciousness stands, in a variety of ways, under the influence of a subjective skepticism. Perhaps this also is evident, that the reasons by which that idea is supported, considered in themselves, do not possess a high degree of essential force. But even this weakness in the reasons shows that we have to do here, not so much with a theory of science as with a great tendency in the universal history of all life. And for this reason success in the struggle after a truth raised above these divergences of opinion depends on conditions which no investigation of science can provide; it depends on the faith of the mind in itself—on the consciousness which it has of problems which are positive and important in their relation to the universe. Science is powerless as soon as doubt and negation rule in the place of this faith, because it falls itself, with its entire contents, within the province of that which the doubt destroys.

EXPERIENCE.

“Science is the mother of experience; and without science is there nothing in it.”—PARACELSUS.

SINCE the famous utterance of Polus,* the import of experience has passed through a variety of changes. Plato and Aristotle understood by the *ἐμπειρία* of science very different things. The former combined *ἐμπειρία* and *τριβή*. Aristotle, who had studied the concept more searchingly, and who first coined the expressions *ἐμπειρικός* (*ἐμπειρικῶς*), understood by *ἐμπειρία* only the summing up of single acts of judgment, with no knowledge of the universal—in accordance with which meaning, it can, of course, form only a first step in science.†

The Stoics were the first to distinguish definitely the scientific (*ἐμπειρία μεθοδική*) from the common experience, and the same distinction was made by Polybius, who in principle and in phraseology was closely allied

* See Plato, “Gorgias,” 448 C: πολλὰ τέχναι ἐν ἀνθρώποις εἰσὶν ἐκ τῶν ἐμπειριῶν ἐμπειρῶς εὐρημέναι. ἐμπειρία μὲν γὰρ ποιεῖ τὸν αἰῶνα ἡμῶν πορεύεσθαι κατὰ τέχνην, ἀπειρία δὲ κατὰ τύχην.

† See “Metaphysics,” 981 a, 7: τὸ μὲν ἔχειν ὑπόληψιν ὅτι καλλίᾳ κάμνουντι τὴνδὲ τὴν νόσον τοδὶ συνήνεγκε καὶ Σωκράτει καὶ καθ’ ἕκαστον οὕτω πολλοῖς, ἐμπειρίας ἐστίν. τὸ δ’ ὅτι πᾶσι τοῖς τοιοῖσδε κατ’ εἶδος ἐν ἀφορισθεῖσι, κάμνουσι τὴνδὲ τὴν νόσον, συνήνεγκεν οἷον τοῖς φλεγματώδεσιν ἢ χολώδεσιν ἢ πυρέττουσι καὶ σφοδρὰ τέχνης.

with the Stoics.* Yet this employment of the term does not seem to have come into general use. The Platonists, and especially the Peripatetics, adhered to the Aristotelian definition, and so it remained to the end a matter of dispute whether or not the *ἐμπειρία* were synonymous with the *τέχνη*.† In the contest between the medical schools, also, it was regarded as characteristic of the Empiricists that they renounced all investigation into causes. ‡

This signification, according to which empiricism was distinguished from science, is the one which passed over into the middle ages in the word *empiricus*; and it continues to exert an influence even in the present day. Bacon drew the line sharply between the standpoint of the Empirics and his own. Still more often, in the eighteenth century, we find the scientific experience separated from that which is empirical or common; and also in Kant we notice a distinction between empirical knowledge and experience in a strict sense. The name of the school, *Empiricism*, although first used in the eighteenth century, and frequently employed by Kant, was brought into a wider use especially by

* See i. 84, 6, where the *ἐμπειρία μεθοδικὴ καὶ στρατηγικὴ δύναμις* is opposed to the *ἀπειρία καὶ τριβὴ ἔλογος στρατιωτικὴ*. Further, ix. 14, 1: *τῶν δὲ προειρημένων τὰ μὲν ἐκ τριβῆς, τὰ δ' ἐξ ἱστορίας, τὰ δὲ κατ' ἐμπειρίαν μεθοδικῇ θεωρεῖται*.

† See Sextus Emp. "adv. Math.," i. 60, where it is adduced as the opinion of the Peripatetic Ptolemæus: *ὅτι οὐκ ἐχρῆν ἐμπειρίαν εἰρηκέναι τὴν γραμματικὴν (αὐτὴ μὲν γὰρ ἡ ἐμπειρία τριβὴ τίς ἐστι καὶ ἐργάτις ἄτεχνός τε καὶ ἔλογος, ἐν ψιλῇ παρατηρήσει καὶ συγγυμνασίᾳ κειμένη, ἡ δὲ γραμματικὴ τέχνη κατέστηκεν)*. Olympiodorus opposes *ἐμπειρικός* to *λογικός* (see Creuzer's ed., 135): *οὐδὲ διαφέρει ὁ ὀρθοδοξαστικός τοῦ ἐπιστήμονος, εἰ μὴ τὸ εἰδέναι τὴν αἰτίαν ὥσπερ οὐδὲ ὁ λογικός ἰατρός τοῦ ἐμπειρικοῦ διαφέρει· ἐν τῇ πράξει γὰρ τὰ αὐτὰ ποιοῦσιν*. (124.)

‡ See, on this point, Häser, "History of Medicine," 3d ed., i. 245 et seq.

Schelling, and generally gave the impression that the doctrine signified by it was an inferior one. *Ἐμπειρία* itself, however, was replaced by *experientia*, which was used (*experientz*) for a while by German writers; as, for example, by Paracelsus, Kepler, and others. In the middle ages the plural, *experientiæ*, experiences, was also formed; as, for example, by Roger Bacon. We find the term *scientia experimentalis* in Nicolaus Cusanus. Our German word *erwarn* (properly found originally in *varn*, to acquire, to search) dates very far back. In the oldest philosophical writer in the German language, Notker, we find *comprehendere* so translated. In the middle ages the expression is in general use. *Erfahrung* (*ervarunge*) occurs at that time, also prominently in Luther. Paracelsus was the first to employ the word *erfahrung* in a strictly scientific sense, as well as *erfahrnuss*, and the predominant *erfahrenheit*. *Erfahrenheit* signified with him the activity involved in the reception of the objects presented through the senses, as well as the totality of what was given.*

This expression, which was used as well by Kepler and others, assumed later a narrower signification;† and, as *erfahrniss* and *experientz* went out of use, *erfahrung* alone remained, and now unites in itself a variety of significations. It signifies on the one side, subjectively, the act of perception itself, the particular acts of knowledge involved in perception, and the sum total of such acts of knowledge; then, however, objec-

* See iii. 78, "Weg der *Erfahrenheit*"; ii. 380, "Erforschung der *Erfahrenheit*."

† Adelung makes the remark, after he has cited the signification which is at present predominant, that "In Upper Germany this word is used also for *Erfahrung*, as . . . I have it from *Erfahrenheit*."

tively, it signifies the object of perception,* and the sum total of that which is accessible to perception—a variation in signification which continually occasions confusion in our definitions.

The concept became naturally a problem for philosophical investigation at every point where the question of the sources of knowledge was discussed; but this question did not become a center of philosophical activity until the modern era. An empirical and a speculative tendency then acted together to change the relations of the question. As opposed to the cosmological theories of the middle ages, there was brought to bear at this point the desire to comprehend whatever is founded on fact with less embarrassment, and with more precision; to distinguish this sharply from all addition on the part of the recipient subject, and to construct science anew on what was thus obtained, as on a sure foundation. If we remember that, simultaneously with the discussions of a Bacon, so distinguished a thinker as Suarez made searching investigations into the psychology of the angels, we shall understand the full extent of this change. The consideration of essential facts became an infinitely more difficult task than it had previously seemed to be, partly because the established cosmical theories were being slowly undermined, and partly because of the discovery of scientific instruments; and for this reason the exact nature of experience necessarily became much more important.

To Bacon belongs the merit of having brought out, with a stimulating vivacity, the problems which arise from such a condition of things, even though he failed to solve them. He drew the line most sharply between

* Especially at the time when the expression *Thatsache* was not yet in general use.

that which in ordinary life is called experience (the *experientia vaga*) and that which is alone valuable to science, and he described the essential characteristics of the latter. He insisted upon a peculiarly scientific experience (an *experientia literata*), by which observations and results might be communicated among men, to the end that a continuous total of human experience might be formed. He developed for the first time the fundamental principles and problems of the inductive method, and extended these to all provinces of investigation, so that he could rightly call his philosophy inductive,* and claim to introduce a reform in all sciences.

But this inductive tendency is supplemented by one which is speculative, which would transform the whole relation of thought to the world, and essentially change the problems of science. The inquiry proceeds from the assumption that we know things, not according to their real existence, but only by means of their action in and upon us; hence we are not at liberty, in our explanation, to proceed to something lying beyond our activity, but are compelled to endeavor to reduce the various phenomena to these first principles, which are simple and actually capable of proof, and then, in turn, from these to derive all phenomena by a legitimate process. This tendency, which is already noticeable in the

* "Nov. Org.," i. 127: "Etiam dubitabit quispiam potius quam obijciat, utrum nos de naturali tantum philosophia, an etiam de scientiis reliquis, logicis, ethicis, politicis, secundum viam nostram perficiendis loquamur. At nos certe de universis hæc quæ dicta sunt intelligimus, atque quemadmodum vulgaris logica, quæ regit res per syllogismum, non tantum ad naturales, sed ad omnes scientias pertinet, ita et nostra, quæ procedit per inductionem, omnia complectitur." "Philosophia nostra inductiva" appears in the beginning of the *thema cœli*. Further, induction as a distinct method was first used by Socrates (see Arist. "Metaph.," 1078 b, 27). Aristotle gave it a name (*ἐπαγωγή* and *ἐπακτικός*), and also an exact investigation: the translation (*inductio*) was introduced by Cicero.

prominent thinkers of the transitional period (among the Germans, for example, in Nicolaus Cusanus, Nicolaus Taurellus, and Kepler), obtained in Descartes a classical expression. Here the ancient categories are replaced by new ones. According to Descartes, we know, essentially, only forces, but are compelled, where we find a single force, to add the substance, in thought, as a supplementary concept. The qualities which had dwelt in the substance as little souls, and which, as concealed properties (*qualitates occultæ*), had stood in the way of exact knowledge, gave way to modifications (*modi, modificationes*), which exist only as connected, and constitute a determinate form of the essential force.*

To be sure, as was usually the case in the writings of Descartes, these new doctrines appear in the forms of the ancient terminology. And yet, in spite of that, they show unmistakably that a reformation in principles has been effected, which would extend to all the sciences, and transform the whole method of scientific

* "Princ. Philos.," i. § 52: "Non potest substantia primum animad-verti ex hoc solo, quod sit res existens, quia hoc solum per se nos non afficit; sed facile ipsam agnoscimus ex quolibet ejus attributo," etc. § 53: "Et quidem ex quolibet attributo substantia cognoscitur; sed una tamen est cujusque substantiæ præcipua proprietas, quæ ipsius naturam essentiamque constituit et ad quam aliæ omnes referuntur." Since the concept of substance thus reaches no farther than the activity, substance must be conceived as continually acting. See, for example, "Epist.," vol. ii. 4, 14: "Necessarium videtur ut mens semper actu cogitet; quia cogitatio constituit ejus essentiam, quemadmodum extensio constituit essentiam corporis." It is noted as one of the two leading principles of his physics ("Epist.," ii. 116): "Me nullas in natura qualitates reales supponere, quæ substantiæ tribuantur, tanquam animulæ quædam corporibus suis, et quæ possint ab illa per divinam potentiam separari; atque ita plus realitatis non tribuo motui aut aliis substantiæ mutationibus, quas qualitates vocant, quam vulgo philosophi tribuunt figuræ, quæ apud illos non est qualitas realis, sed tantum modus."

investigation. It was seen to be especially important that we discover the simple forces, reduce to them the heterogeneous elements in phenomena, and establish the conditions under which the special formations may admit of the coexistence of these simple forces. This entire doctrine is not superior to attacks; it rests upon a determinate theory of the world, and of the relation of the thinking subject to it: but it received a striking confirmation from the mechanical conception of nature; and, when it then sought to establish itself everywhere, it ruled completely the science of the seventeenth and eighteenth centuries, until it was shaken by Kant within the province of philosophy.

In the entire realm of science, the inductive and the speculative tendencies now acted upon each other, and mutually made good progress. The one restricts the investigator to what is given, and insists upon an abundance of material; the other, on the contrary, gives the standard for the proper estimation of what is given, and for the working of it; and so each enhances the value of the other. It is just this close connection of the two which invests with such an intensity the struggle over truth at the present day, and stamps modern science with that peculiar character which distinguishes it from all earlier developments, and gives to all the different systems certain points of contact and resemblance. There is even in the contest concerning the sources of knowledge far more harmony than would appear at first sight. All agree that this is a process in the material world and in life: knowledge is not supposed to be received, as something inherited, or inborn, or in general ready-made, but much rather to be something immediately produced; and hence all agree in

desiring of it clearness, evidence, and constant capability of verification. Debate arises only over the question where the forces producing such results are to be sought; and, if here some decide in favor of the activity of the mind originating from within, and others in favor of the forces of the external world revealing themselves to it, the dispute must become the more fierce the less endurable is a mere juxtaposition of the two theories in the one closely coherent world which all parties assume. It is not possible to enter here upon the particular phases of this dispute, nor is it necessary, since, by the turn which Kant gave to the problem, the leading feature of the discussion has lost, for us, its immediate significance. Besides Kant's definition, only that of Leibnitz remains, as of independent value.

Leibnitz was far from despising experience; but he believed that it is impossible for us to stop with it, because our striving after knowledge is satisfied only by the discovery of causes throughout the whole world—a discovery which experience can not give. The facts of experience seem to him to be material which is to be transformed by the work of science into principles of the reason. Actual knowledge is ultimately possible only when the data are reduced to principles in which, as in equations, the agreement of subject and predicate is immediately evident, so that the task of philosophy is found to be an attempt to analyze what is confused into such simple propositions.*

This, however, can be fully attained only by ne-

* See "De Libertate" (Foucher, ii. 181): "Demonstrare nihil aliud est, quam resolvendo terminos propositionis et pro definito definitionem aut ejus partem substituendo, ostendere æquationem quandam seu coincidentiam prædicati cum subjecto in propositione reciproca; in aliis vero saltem inclusionem."

cessary truths (*vérités de raison*); while by contingent truths (*vérités de fait*) the finite mind is able to approach the solution only in a process incapable of completion. Although it is peculiarly the task of philosophy to transform knowledge through experience into rational knowledge, and a complete assurance and verification of judgments are possible only so far as we succeed in this,* still experience is necessary, not only as a point of departure and means of progress, but also as giving a residuum, the significance of which can never be fully explained.†

Kant agrees with Leibnitz in this, that philosophy has experience not as its principle, but as its problem; yet, in accordance with his own peculiarity of method, he considers the activity exerted by philosophic thought upon the phenomena as something which dissects and analyzes; and this activity is all the more searching the more it comprehends the nature of experience itself and tests the process over the results of which there has been so long a contest. But, because the fundamental distinction between the understanding and the sensitive faculty was in general of essential importance to the formation of his system, the two are separated in experience also; and experience thus appears as "the product of the understanding, from the materials furnished by the sensitive faculty."‡ As this distinction between matter and form was made in the definition,

* See, for example, 344 b: "La liaison des phénomènes, qui garantit les vérités de fait à l'égard des choses sensibles hors de nous, se vérifie par le moyen des vérités de raison; comme les apparences de l'optique s'éclaircissent par la géométrie."

† Leibnitz thus comes near to the distinction between analytical and synthetical judgments; but he considers the whole distinction as relative, and as one which disappears in infinite development.

‡ See "Works," Hartenstein's ed., iv. 64.

the one being assigned to things, the other to the mind, it became everywhere a problem to analyze what is empirically given into these factors, in order to bring subsequently into one system that which had been thus separated. By his grand execution of this great endeavor, all that hitherto had been foremost in the certainty of philosophical knowledge was shaken, and, above all, the problem of experience itself was completely changed; but the change, in turn, brought with it so many new questions, as practically, for the first time, to inaugurate what is now the real contest.

First of all, the starting-point can itself be involved in doubt. Kant discussed the question as to how experience is possible; but it happened here, as in another decisive point in his system (that of his doctrine of freedom), that the question whether the object of the investigation was something real was everywhere kept in the background. This is the one place in which skepticism can always insinuate its attacks upon the Kantian doctrine.* The empirical school, however, can find fault with the fact that experience, with its factors, is presented too much as something completely given, and capable of being from its very beginning reviewed. We are compelled to remember here that much of that which is asserted to be necessary knowledge *a priori* has, as a matter of fact, worked itself out from what was really contingent, as the result of a long struggle, and by the aid of experience—for which reason we can by no means consider further changes to be absolutely excluded. In

* Herbart's objection (see "Works," vi. 286) to this is not without foundation: that there is a *petitio principii* involved in the statement that "experience possesses an objective validity, which contains in itself an absolute solidity, and is of a far higher rank than that of a universal, uniform habit of men."

ultimate analysis, the relation of the reason to experience, in the speculative philosophy, does not seem to be determined beyond all contradiction. Thought was considered superior to experience as its product, and the assumption that thought produces the material world out of itself seemed to be imminent; still the necessity of the *thing-in-itself* was maintained, and the reason was limited to this material world as given. This involved a contradiction, which was clearly expressed by Kant himself in the *Transcendental Dialectic*, and which he attempted to escape by the different definitions of the theoretical and the practical reason.

The Constructive philosophers carried out an extensive and one-sided development, in the doctrine of the practical reason. Since they desired to produce the whole world by the activity of thought, experience could no longer be to them the starting-point, but only the final goal. It was to be brought into the comparison which tests it only at the conclusion of the philosophical process, which process should follow only its own laws, without regard to what was presented to the senses. The difference between empiricism and science consisted in this, that the former showed as already produced that which the latter had formed by the activity of thought.* Moreover, this school took possession by degrees of the whole province of science. With Fichte, philosophy deals only with universal and necessary defi-

* Schelling calls (iv. 97) "experience not a principle, but a problem; not a *terminus a quo*, but a *terminus ad quem* of construction." He says (iii. 283): "The antithesis between empiricism and science rests on the fact that the former regards its object in Being as something ready-made and completed, while science regards its object in Becoming and as something to be first produced." In general, Schelling has paid more attention than any of the other German Idealists to the problem of the relation of philosophy to experience.

nitions,* while knowledge from experience gives the nature of particular things. He thus guards himself emphatically against a nature-philosophy, as against any historical philosophy which claims to be able to evolve the individual from the concept. Schelling goes a step farther in his nature-philosophy; and in his mental science we see him, in his first Period,† ever tending more and more toward philosophical construction, until at last this development culminates in Hegel, who leaves nowhere to experience an independent significance.

The thoughtful theory of Herbart, which recognized experience everywhere as the starting-point, but which, through the contradictions prominent in it, was led into philosophy and a consequent transformation of the data furnished by experience,‡ succeeded in making no farther advances; and so the reaction from that sovereign position which thought had claimed for itself proceeded not so much from philosophy as from the special sciences and from common sense.

Common sense, which has a concealed hatred for every philosophy, as for all higher ambitions of the reason, and which concerns itself with the systems only to point out what is fallacious, absurd, and ridiculous, found in the doctrines of the Constructive philosophers a rich field for its attacks. So long as one did not deal

* But here, too, experience is a condition of the empirical consciousness. See vi. 313: "All laws of reason are grounded in the nature of our minds, but they come into empirical consciousness only through an experience to which they are applicable."

† The discussions of the second Period, belonging here, in spite of many strikingly appropriate remarks, are too far removed from modern investigation to be included in the vital questions of science.

‡ He fails to prove, in fact, the right of thought thus to test experience by its own laws, and also to prove the special criteria by which the process was to be conducted.

with the elements of the decisive problems of philosophy and the historical development of thought, that for which one fought necessarily appeared Quixotic ; and we can not wonder that many a man fancied that he demonstrated his own mental superiority if he overwhelmed with ridicule doctrines the foundation and connection of which appeared to him simply enigmas. Inasmuch, however, as such anti-philosophical tendencies prefer the covering of a philosophical theory, Empiricism was assumed as a verbal symbol of the attack.

Those who defended the special sciences, particularly the Scientists, had better reasons for their position. For a long time their work was not affected nor ruled by the preponderating influence of the Constructive philosophy—by no means as much as is often to-day asserted ; yet the essential significance of those sciences, with all their devoted and productive labor, was undoubtedly called in question by a system which supposed it possible to develop the whole content of experience out of pure thought. It thus became evident what errors the Constructive thinkers committed in illegitimately claiming this province for philosophy.

The rejection of this claim from the side of the exact sciences was thus thoroughly justified, and their change of attitude to the aggressive is easily explained. The only danger was that one might in that way judge the principles involved simply from their consequences, and often from consequences which were very remote, and so, on his side, pass beyond his proper province, and undertake the decision of problems the treatment of which really involved many other conditions. There were in fact some such men who, in addition to their regular work, attempted in a measure to solve in their leisure hours questions which had taxed the greatest skill

of a Leibnitz and a Kant. The utterances, however, which came from this side, virtually agreed in resolutely contesting the right of philosophy to extend itself to the results of these special sciences. This justifiable protest against the Constructive philosophers led, in this way, to a distaste for all systematic philosophy.

And then there arose at last, within philosophy itself, a development in favor of the Empiricism which had been undervalued in the discussions of the earlier writers. Those elements of science which favor Empiricism, which had often been passed over superficially, now asserted their claims to notice with renewed energy. With Empiricism, moreover, were associated many results of the special sciences, which, when carried over into philosophy, made necessary a transformation of the question concerning the origin of knowledge. At this point comes into consideration the principle of the positive characters of the forms of knowing and being which shows once for all the weakness of a philosophical construction of the contents of experience out of the most universal concepts. While Empiricism has Kant as its companion, in this respect, up to a certain point, yet it turns against him when it admits the gradual development of its rigidly valid forms—allying itself here with Herbart, but, above all, submitting the question to a special investigation.

The further prosecution and philosophical accomplishment of such fully justifiable tendencies must, however, lead to an essential change in philosophy, and in its relation to the special sciences; and we can therefore only thank Empiricism for insisting emphatically upon the validity of those points. It is to its advantage, in its influence over popular thought, that in its work it understands how most fully to appreciate and

to utilize in the greatest degree the investigations of the exact sciences, while the supporters of other schools, as it seems, either oppose them or are unable to make use of them.

But all these different tendencies act simultaneously in popular thought, and appear united in a complex whole, in which it is difficult to distinguish the single elements. The philosophical, the unphilosophical, and the anti-philosophical come together and interpenetrate. It is not easy to decide where the one begins and the other ceases. For this reason the criticism of modern Empiricism involves a peculiar difficulty. In this confusion we are in danger of making the one element responsible for another—in fact, of treating the friend as an enemy, and the enemy as a friend. But this very union of heterogeneous elements in a total effect is characteristic of the state of things in our day. Especially, the important fact for our consideration is not the philosophical Empiricism of particular scientists, but Empiricism as a complete phenomenon; and hence we must regard, as well as we can, the leading features of the entire development, at the risk of placing less value upon the critical discussions of particular scientists than upon the dogmatic assertions of the mass.

The question in dispute, as universally considered, is primarily this: How high a value are we to place upon the activity of thought in the conception of the material world? Is the mind essentially receptive, and active only as it forms in itself transcripts of things; or is it its right and its duty to subject what is presented to it to the test of its own laws, and according to these to form its results? In particular, is it the province of philosophy simply to receive and combine what is furnished to it by the special sciences; or has it, on the

contrary, with an independent method, an independent task? Many gradations are possible on both sides; but a specific antithesis remains in the fact that, in the systematic construction of philosophy (not in the psychological development), the process is, on the one side, from thought to objects—on the other side, from objects to thought. It may, however, be considered a special characteristic of the kind of Empiricism which is to-day commonly predominant, that the inductive method is esteemed as the peculiar means, not only of scientific investigation, but of philosophical knowledge as well. In this view the independent activity of the mind, as contrasted with its objects, is degraded to a most insignificant position; thought is compelled, essentially, to limit itself to the clear presentation to consciousness of that which things accomplish by themselves; the formation of the individual object of thought into definite shape seems to be determined by things from without; and science is built up by degrees into a whole in the manner of a pyramid.*

Of this strictly inductive method, we assert that it does not even rule in the province to which it lays especial claim, that of the natural sciences; that it falls still more into the background in the other realms of thought; and that it does not reach at all to the ultimate problems of philosophy.

The first statement becomes sufficiently evident, from a close examination of the processes and methods involved in the work of the natural sciences. If we analyze, so far as we can, such concepts as hypothesis, analysis, law, and others; if we consider the categories under which phenomena here, not arrange themselves,

* Bacon is the classical type of all this.

but are arranged by us; if we, finally, glance through the systematic articulation of these sciences, we shall find that, to all these, induction is an invariably necessary assistant, an indispensable condition, but that nowhere is it the sufficient or even the most important productive power. But perhaps it is simpler to glance at the historical development of these sciences, because it is here that the different forces are presented most conspicuously.

We believe that we can say here, that every one who is familiar in any measure with the vigorous thought-contests which accompanied the unusually difficult transition from the Aristotelian-Scholastic to the modern, from a naïve to a scientific explanation of nature—that any such person will drop as untenable the supposition that in these contests the inductive method of investigation turned the scale. Induction presupposes that the particular cases can be observed for themselves, and for themselves can furnish a definite result; that then the particular classifies, arranges itself, etc., until a whole is attained. But how now if the whole foundation is shaken; if questions are raised concerning the stability and ultimateness of the individuals; if everything existing is dissolved before the glance of the investigator, and the question is to discover the elements of a new world, and to distinguish the ultimate forms remaining in the confused mass? When the thing to be done is to construct anew something solid out of an immense chaotic mass, and we are called upon to formulate and to conceive the phenomenal under new relations and from a new point of view, induction then stands before problems which overpower it; for, while it can build up what is given it, it can not essentially and intrinsically transform a world.

Nor was the doctrine of categories, in which the modern explanation of nature is involved, discovered by Descartes by means of induction. Is it by induction that the investigation of nature is determined as involving the comprehension of the phenomenal as something thoroughly compound, and as involving, first, its reduction to simple primary forces, and, secondly, its derivation from these by the help of the idea of development? In harmony with such a theoretical determination of the task, not induction, but analysis was the peculiar instrument of progress in the actual work of scientists—of such men as Kepler and Galileo, Descartes and Newton. They saw that it was, above all, their task to analyze what was confused in a phenomenon, that they might arrive at simple forces, and from those again work back to what was originally given. They went out beyond this, only that they might return to it again; but it was only by this exercise of thought that it became possible to see in the given phenomena anything else than had been seen there before; only so could they hold and conceive, as itself a legitimate product, that which, received unchanged, was involved in complications and contradictions.

To this end, of course, a precise determination and a constant consideration of the phenomenal were unconditionally necessary; and, so far as this went, modern natural science had undeniably an inductive character. But for the really decisive work itself induction was thoroughly insufficient, since the object which it observed was itself already complicated; experience “became conscious at the same time of laws and exceptions” (see Goethe, “Ausz. letzter Hand,” 50, 160); and hence the circumstances under which it could form a decision required a transformation of its material.

Facts of knowledge, as the so-called law of inertia, the law of the persistence of force, etc., have not been discovered, in gradual ascent, from single data—for these all contained at the outset more or less apparent contradiction—but they became possible only through the fact that scientists knew how to span the totality of things with comprehensive glance; that they grasped the heterogeneous, not as an aggregate, but as a system; that in thought they followed out series by themselves into the infinite; and that, by all this, they obtained a position from which they could form a new world, without a conflict with those apparent contradictions. In this way have been achieved all those great discoveries which excite our astonishment.

The mathematical character of modern natural science is also a witness for this interpretation of its method. If Kant's statement is correct, that natural science contains only so much science as it does mathematics, and hence the knowledge of laws and forms is to be regarded as of primary importance, then induction must be content with the second place. For the mathematical element, through its primary concept of pure quantity, turns out to be, in principle, superior to the inductive element. And, as a matter of fact, the first scientist who formulated mathematical laws in nature, John Kepler, did not proceed to these by direct highways from phenomena; but, after sufficient inquiries in the material world, he first calculated possibilities and hypothetically developed consequences, and not till then turned back to experience for comparison and decision. Only because the mind produces the mathematical forms in its constant, inner activity, did he consider it possible that it could find laws in nature: for which reason such a cognition is explicitly expressed as a recogni-

tion.* The other great scientists came much nearer to this method which Kepler employed than to that which was recommended by Bacon. A man like Newton might, in many statements, apparently profess to be a follower of the inductive tendency; but a scientist's opinion of his own method and that method itself are two different things. In his actual process Newton agrees with Kepler and Descartes much more than with Bacon and Locke. Surprise is sometimes expressed that a scientist, who recognized the methods of the natural sciences as accurately as Bacon did, should have advanced scientific knowledge so little by his own work. But there is no cause for surprise, since the assumption itself is inaccurate. Bacon, in some details, recognized correctly many processes and methods of natural science, and brought out the value of this knowledge with all the vivacity and perspicuity of his style. But his doctrine of method, considered as a whole, neither corresponds to the scientific process of our day,† nor could it be productive in the condition of science in his time.

In brief, we believe that the peculiarity of modern natural science is misunderstood, and that especially the important thought-labor involved in it is undervalued, if it is supposed to be chiefly the creation of induction. After the path is once broken, induction can accomplish the work of the day; and it is not at all strange that it is far more prominent to the reflective consciousness

* See "Opera," v. 216: "*Idoneam invenire in sensibilibus proportionem est detegere et agnoscere et in lucem proferre similitudinem illius proportionis in sensibilibus cum certo aliquo verissimæ harmoniæ archetypo, qui intus est in animo.*" In general, Kepler's doctrine of knowledge, which is especially developed in the fourth book of the "*Harmonice Mundi*," should not be so wholly forgotten, in favor of the Baconian doctrine.

† This is evident from his undervaluation of mathematics.

than operations which are of superior power and importance; for that which is the most important, not being produced by reflection, escapes our notice while in operation, and even after it has been employed, and so the real process remains concealed beneath what is actually present in consciousness. Unless we are prepared to identify with what is the decisive power involved what is only its necessary condition, or to interpret the concept of inductive investigation as involving the assertion of something self-evident, we are compelled to coördinate induction with and subordinate it to other methods.

But, then, this same method is supposed to be transferable to the mind as well, because of the analogy between the experience of internal and that of external phenomena. We can not of course defend what the Mystics understood by inner experience.* There can, among scientific men, be no doubt that it leads to a contradiction to establish something which avoids the essential conditions and forms of knowledge (as such an inner experience does) as a source of an act of knowledge, and indeed of a knowledge which surpasses all other forms of judgment. If, then, we carefully distinguish between inner experience and the experience of internal phenomena, the demand that the latter shall share in the definite establishment of a cosmology is fully justified. But it becomes a very problematical assertion if the specific form, which the concept of experience has received in the investigation of the material world, is transferred to the thought-world without modification, and if an exclusive sway is demanded for meth-

* Weigel, especially, introduced the phrase into German ("innere Erfahrungheit" and "innere Erfahrung"). See "Christl. Gespräch vom wahren Christenthum," Cap. ii.

ods which, even there, are employed only in connection with and after other methods.

Before we take up the watchword of the *inductive psychology*, so attractive to the predominant tendency of our day, it is especially necessary to ask whether the conditions of applying the inductive method to this material are given, at least to the same extent as they are in the case of the investigation of nature, provided we hold that a method should be adapted to the nature of its material, rather than that the material should be constrained to forms not fitted to it, for the sake of a system. But, as a matter of fact, there is in this respect unmistakably a great difference between the internal and the external world. The phenomena of the former do not immediately arrange themselves in a world which is connected, permanent, and common to all observers; so that, though there may be a perception of the internal, there is no internal intuition, and that which we have experienced is exposed to constant change in the progressive development of the whole.* The particular phenomena are not in general given as relatively independent, and hence can not be held as solved by themselves, but they are always influenced by their connection and occurrence in combinations. And, moreover, the universal does not proceed simply from the particular, and absorb it in itself without residue; but in every combination the particular preserves a certain independence. But here we face problems for which the inductive method is by no means a match.

* Herbart says correctly (vi. 358): "Every fact which we assume as known in previous time, through consciousness, or in general as having already happened, and being present in plain sight, can be called in doubt—in fact, must be called in doubt—because of the vacillation in all internal perception, and because of the extreme ease with which some element can be insidiously interpolated in such a fact."

On this account, while there is, of course, no doubt that induction has an important significance in psychology,* still it can here, as in natural science, operate only on the border-land between nature and the soul. As soon as the problem becomes specifically psychological, induction is banished into narrower limits. We may, for example, ask how a system of ethics or religion can be inductively proved from psychical phenomena. Is it through combination of the similar, and ascent to universal propositions? But we must have formed a previous judgment, in order to decide what material belongs here; and we must have ascertained the boundaries, in order to discover what is similar, which, in this case, must possess intrinsic similarity. Or are we to obtain a law by striking an average?

From all this it can be inferred, with sufficient clearness, on how weak a foundation an inductive psychology would stand as a system, and how absurd it would be to construct the whole system of philosophy on such a basis. This would be true even if that which is immediately present to perception and observation were pure fact; while, in reality, it has passed through our own apprehension, and the combinations and for-

* We have no objections at all to make to an empirical psychology, so far as it claims to be only a preparation for philosophy. For our part, we desire it. But the descriptions, classifications, and analyses, which it is able to give, establish no science, and do not lead to an ultimate distinction between what is actually existent and what is added in thought. And then we can always be mindful, here, of Schelling's warning (iii. 282), "that only those warm admirers of Empiricism, who, faithful to the concept of Empiricism, extol it at the expense of science, have desired to sell to us as Empiricism, not their own judgments and what is inclosed in nature, but rather what has been forced upon objects; for, although many may believe that they can sagely discuss the subject, still there is much more involved than many imagine in seeing clearly the events of nature and in accurately translating what has happened."

mations in which it now meets us are the results of a process. It is not the metaphysician who first begins a transformation of the original facts. If it were, he could not be blamed too severely. But every man who thinks performs it from the very beginning, even though unconscious of it; and so we find that in what is presented there are already results, perhaps highly complicated results, the actual contents and simple elements of which can be discovered only by philosophical methods.

There is something tempting in the thought of proceeding from the soul, as what is nearest and most accessible to us, and of binding all further knowledge to what is obtained from it; and it is fully justified in this sense, that what Descartes called the Archimedean point for philosophy is to be sought in the thinking consciousness. But, if we take the specific contents of the human life as our starting-point, we are met by the fact that it is the very thing which lies nearest that offers the greatest difficulties to our knowledge. The whole development of the mind shows that the evolution does not proceed from a microcosm to a macrocosm, but from the latter to the former. The truths which the thinking mind comprehends it has always first referred to the whole world, and only subsequently sought to employ in the interpretation of itself. Only when truth is thus brought to its notice, as world-wide in its sway, has it obtained power enough to be applied to the interpretation of internal phenomena as well; and then, in fact, every important judgment concerning the whole has proved itself to be true and forcible, in that it enlightens us concerning ourselves.

For this reason it is true, whether we like it or not, that psychology is dependent upon the philosophy of

the universe—that is, upon metaphysics. If we examine more critically its history, the formation of its general principles, even the coinage of its terminology, we shall find it all dependent on the general development of the whole system. We shall see that, everywhere, even what was believed to be recognized as a fact was conditioned by the starting-point, and by the connections of the method of observation. For phenomena do not, from the outset, obtrude here upon consideration, but they wait for the observer, and do not come into the field of vision until the attention has been directed to that particular point. What is then discovered seems to be self-evident, although the real circumstances of the case prove the opposite, namely, that much which every one now believes he sees immediately and intuitively has come into consciousness only at a late stage of the progress of scientific thought, and later still has come to an explicit recognition. If we examine them closely, our ideas of the soul present themselves essentially as theories and hypotheses (as even the concept of the soul itself, empirically regarded, is an hypothesis), dependent, indeed, upon the general nature of our thought, but dependent, also, upon its historical formations. It is under the influence of such theories that our method in psychology now stands. It can not, then, be sufficient, in order to penetrate to the real facts, simply to lay aside the metaphysics of philosophy; for, in so doing, we should only place ourselves under the influence of an uncontrolled metaphysics.

And with this we have arrived at the decisive point of the whole discussion.

It is certain that thought has not the least right to extend itself beyond the starting-point of ordinary Empiricism, and, on its own responsibility, to undertake to

transform the phenomena which are given to it—provided the phenomena thus given are to be regarded simply as matters of phenomenal occurrence. It is, however, not only the right, but the duty of thought to do this, when we are compelled to recognize in the phenomena a previously determined cosmical theory, which has come into the condition in which we find it only as the result of a thought-process. In this case, thought does not create for itself, at pleasure, a world of phantasy by the side of the actual world; but, by its activity, corrects the original errors, and in a measure restores the integrity of that which comes under its consideration.

Whether we regard the nature of this activity, with Leibnitz, as the passage from a confused to a distinct knowledge; or, with Kant, as the solution of the complex into its factors, and as the systematic combination of ultimate elements; or, with the Idealists, as the transformation of the quiescent and dispersed in a unifying process involving the whole; or, with Herbart, as the removal of contradictions from the concepts of experience; or whether we adopt any other methods of procedure—still it is the common conviction that it is an error “to consider a concept valid because it is already given” (see Herbart, iii. 82); that, for imperative reasons, what is given can not be retained just as it is given; and that it is a fundamental mistake not to proceed to a metaphysical working-over of materials.*

While Empiricism ends simply with what is given it, it presumes to assert a thesis, which is none the less

* Herbart has asserted this most emphatically. He finds (vi. 314) the origin of a false metaphysics in the fact “that the first principles of experience are allowed to remain, and are assumed as valid, just as they are first brought to light by the psychological mechanism. Sins of omission are what prevent us from advancing to a true metaphysics.”

positive because it takes a negative form when it forbids us to proceed beyond experience; and which has none the less a metaphysical character because it identifies ultimate being—or what is, so far as accessible to us, ultimate being—with the phenomenal.* The weight of this thesis lies in the fact that it seems to be immediately evident, and that the power of the impression thus made holds its ground against the attacks of thought. It is manifest that the mind is, at first, a *tabula rasa*. Only by degrees do acts of insight appear and individual objects arrange themselves into shape. The forms of knowledge, even, which in the Kantian philosophy were something firm, and given in combination, are separated into single elements, and developed in their order. But this development is seen everywhere to be suggested and determined from without; and whence but from without should its universal content come, unless we are to take refuge in the now exploded innate ideas? There is, then, only so much in the mind as it has earlier or later received from outside. Knowledge has truth only so far as it reflects the facts which lie without: it is verified only by reference to those facts. But, since we call this reception of the external experience, the conclusion follows, that all knowledge arises from experience, and it is as foolish as it is useless to wish to go beyond that by the aid of speculation.

This whole reasoning seems simple—if anything, rather too simple; for it might lead some one to raise the question, How, then, can it be explained that men, for example, like Leibnitz and Kant, made a mistake in what was so evidently the real condition of things? and, once started on such a line of questioning, he might

* We are reminded here of Plato's statement: τοσούτῃ μᾶλλον εἰσιν, οἷοι οὐκ οἶονται, ὅτι οὐχὶ οἶονται. ("Theætetus," 176 D.)

then very easily feel prompted to ask further, whether the reason for this conflict of opinion, instead of lying in a mistaken judgment of tangible facts, were not to be found in a difference in the significance and value given to those very facts.

And this is the actual state of things. That objects present themselves externally, as Empiricism asserts, the other schools also grant, although with occasional protests. But, that this which seems to happen in the phenomenon is identical with what happens in very substance, does not appear to them absolutely certain. They do not deny that the mind originally, regarded from outside, seems like a *tabula rasa*; * but they hesitate to suppose a being without any kind of activity, and assume that no action can come in from without, unless it is received by an action from within. It does not escape their notice that the mind, in its relation to things, appears to be only passively receptive. But, more closely examined, the concept of pure passivity seems to them untenable, in that it assumes action without counteraction; and so they are aroused, by deeper penetration into the matter and keener analysis of the processes involved, to prove also an activity of the mind in its connection with things.† They readily recognize the formation, from simple elements, of what is finally presented as a complex total; but they can

* It has often been noticed, on the side of the speculative philosophers, that this idea essentially regards the mind as something corporeal. For example, Nicolaus Taurellus. Leibnitz, too, in a further comprehension of the question, says (223 a): "L'âme a-t-elle des fenêtres, rassemble-t-elle à des tablettes? est-elle comme de la cire? Il est visible, que tous ceux qui pensent ainsi de l'âme la rendent corporelle dans le fond."

† The Empirics always say that things are given; but there must also be something to which they are given. Or do they mean that things are found so and so in the world? but, then, who and what is the finder?

not desist from the question whether this formation is absolutely conditioned from without, and whether every combination of the heterogeneous does not point also at inner laws. They are ready to value experience as highly as possible; but it is to them a problem to discover what is already presupposed by experience, and to ask whether this is not itself complex, and therefore needs to be analyzed into different factors.

The problem which arises from all this is wholly different from that from which Empiricism originally proceeded. The question is not how knowledge arises, from a psychological point of view, and whether it starts from experience and is held to experience, but what the origin is of that which is known through experience, and, accordingly, what opinion should be formed of ultimate facts. The contest, then, concerns not the determination of what phenomenally happens, but what ultimate judgments should be passed upon the events themselves, and what opinions should be formed, by reason of such a judgment, concerning ultimate action and existence. It is, then, thoroughly absurd for the Empiric to compel his opponents to discuss that which is primarily factitious, and to contest something which can be experimentally proved.*

Kant, too, stated the matter correctly (see viii. 536), when he carefully distinguished the question whether all knowledge arises from experience, as a *quæstio facti*, from the *quæstio juris* whether it can be derived from experience alone as the highest ground of knowledge. We prefer to-day, in dealing with this problem, not to tear apart roughly the questions of right and of fact;

* The difference between Locke and Leibnitz is not so irreconcilable as is generally supposed. The one may be right at the beginning, the other at the end.

but, then, it does not yet follow from this that they should be simply confounded. In every case, if we start the question of right, the investigation assumes another meaning and another character. We can then no longer form a decision immediately concerning individual cases; but their justification must be found in their connection, while the method and reason of this connection must themselves be systematically considered and explained.

From the first, the starting-point is changed from the psychological investigation, which is engaged with the empirical production of knowledge, to the transcendental investigation, which seeks to discover the origin of knowledge, and the metaphysical, which seeks to fathom its ultimate significance. In the former, the process in the empirical advance of knowledge is from the external to the internal, starting from the world as something objective. In the latter, where the question concerns the ultimate origin, the mind must, first of all, be considered. Again, in the former, one must simply describe from observation what goes on in the process, and be content with the facts presented. In the latter, where the object is to discriminate between the mind and the world, and to advance to the last facts attainable by us, the results of the former process can serve only as phenomenal, and to be understood must be tested and transformed. But such a definition of the problem, and the transformation involved in it which changes the investigation by descriptive aggregation into one which is analytically systematic, must essentially affect the nature of all single concepts.

The Empiric usually appeals to facts; that is, to "objects of concepts, of which the objective reality . . . can be proved" (see Kant, v. 482). But what, then, in

general, is comprehended under this concept? Only the single event in the external world? Or are there also general facts—are there also subjective facts? And is Kant to be considered a fantastic visionary in thinking that he derived an idea from the reason, namely, the idea of freedom, which he regarded as a fact (see Kant, v. 483)? But, then—and this is the most important question here—are phenomena, as they are immediately present to consciousness, already pure facts? Every inquirer in his own sphere, according to his own method, will agree with the philosopher, in his ultimately comprehensive and decisive investigation, in asserting that the facts in the phenomena can be ascertained only by the work of thought; * that this problem can be treated only by the criticism of all the elements involved; and that the single data obtain a firm significance only through their connection † with one another in this whole.

Moreover, the concept of verification changes as the concept of a fact changes. Verification is usually thought to mean the comparison of the constituents of a percept with the external object; but this definition is not sufficient even for the special sciences. In mathematics, for example, we can confirm the truth or falsity of the process only by the consistency of the thought-process itself, which reduces what is problematical to

* Schelling says rightly (x. 228) that, in all possible investigations, the determination of the pure, the true facts, is the first and the most important thing to be done; but that it is, at the same time, the most difficult.

† The expression *Thatsache* (fact) is, aside from other reasons, an unfortunate one, in that it seems to represent something as firmly grounded and self-contained while it is still to be tested. The word occurs first in the last half of the eighteenth century (as, for example, in Lessing's controversial writings against Götze, in Herder, and others). But Adelung wanted to banish it as "unfit, and compounded contrary to analogy," and "liable to misinterpretation." Fichte insisted upon the concept of *That-handlung*, as opposed to *Thatsache*.

immediate judgments.* But in philosophy, where not only the entirety of the external world, as such, but also knowledge in general, can be called in question, wholly new problems are opened, which can be taken up and discussed, as far as is in general possible for us, only by a systematic investigation. The idea of solving such questions of general principles by isolated data should be decidedly rejected.

And now, lastly, we consider the concept of experience itself, from which all knowledge is supposed to originate. If this means that we obtain all that we know from the thought-activity which appears and acts in relation to the world, no one will have any objections to make to it. If we are to understand by it that this activity is always restrained by the objects opposed to it, the assertion is more problematical, and a glance not only, for example, at ethics,† but also at pure mathematics, can excite doubts concerning it. But if it is asserted that in this co-existence the mind ultimately retains all that comes from outside, without any formative activity on its own part, we have no longer a presentation of empirical occurrences, but a specifically dogmatic thesis concerning their contents ‡—a thesis, the

* The first philosopher who seems to have thoroughly investigated the problem of verification in general science, Roger Bacon, presented mathematics as the means of verification for the rest of knowledge, and especially for natural science. (See "*Specula Mathematica*," dist. I.)

† See Kant, iii. 260: "In the consideration of nature, experience suggests to us the rule, and is the source of truth; but, as for ethical laws, experience is, alas! the mother of illusion; and it is highly objectionable to wish to derive from or to limit by that which is done the laws for that which I ought to do."

‡ Hence the erroneousness of the customary way, in language, of opposing experience and reason, and of regarding that which obtains significance for knowledge only by scientific activity, as something ready-made in distinction from that activity, and given as fixed. Boyle, "the

ordinary demonstration of which suffers from a constant *petitio principii*; for in it the external world is usually regarded as something given and presented to the mind ready-made: but this fact, which may seem self-evident to the unphilosophical consciousness, is just what is called in question; for the very point in dispute is whether we do not often, in such reception, only receive back something which we ourselves have attributed to the world, and whether the Empiric does not forget something which is a concomitant of experience—the observer himself.

There is thus an ambiguity if it is asserted that we should not go out beyond experience. If the idea is that phenomena are to be left unchanged, just as they are given to us, then not only philosophy, but every kind of science, is destroyed; for every act of knowing, if it seeks to discover laws and causal connections, and to solve the composite in phenomena, or to unite what is apparently independent, must go beyond the senses and transform what is immediately presented to them. The Constructive philosophers were entirely right when, supposing this to be the meaning of experience, they attacked the concept of an experiential science,* and saw a complete contradiction in the using as a principle—and, indeed, as the highest principle—in philosophy, experience itself, whose very essence consists in the fact that it never leads to a principle (see Schelling, vi. 78).

Christian virtuoso," toward the end says, with reason, in regard to this: "When we say experience corrects reason, 'tis an improper way of speaking; since 'tis reason itself that, upon the information of experience, corrects the judgment it had made before."

* Thus Schelling calls (iii. 282) the concept of an experiential science an "hermaphrodite concept, under which nothing connected, or rather nothing at all, can be thought. What is pure empiricism is not science; and, conversely, what is science is not empiricism."

The only mistake they made was in giving any scientific brain credit for such a concept of experience. Of course, it is the scientific experience which we should profess. But, then, the question arises whether, according to what has just been said, even this does not presuppose an independent thought-activity; and the champion of such an experience enters into a discussion which, when carried out consistently, must necessarily adjudicate to philosophy a problem of its own beyond experience. The Empiric falls into the dilemma either of seeing himself driven back upon the common experience by the consistent denial of thought-activity, or of denying in philosophy that which he defends in the special sciences; the consequence of which is a constant vacillation in the concept of experience itself. But, if one concedes the right of changing the form of what is given, he can not evade the question whether such a transformation (entirely without regard to the relativity of the concept's form and content) does not lead further in regard to its matter also; and whether thought-activity does not thus rise, by its very nature as truly as in fact, above the foundation furnished by the phenomena, and advance legitimately beyond it.

But the essential fact for us, here, always remains—that the problems and claims of philosophy constitute the highest development of the entire work of science, so that they can not be laid aside as something wholly adventitious. And this is particularly true of modern science, which assumes a far more free position in relation to what is given in sense-perception, and which by its analysis has recreated the whole naïve cosmic theory. Although the special sciences neither formulate the general question nor pursue it to its final answer, still philosophy undertakes to do this, and so takes up the

nature of knowledge as a necessary and comprehensive problem in order to justify the entire work of science.* Moreover, through this it first obtains for itself a clear and definite task, a systematic arrangement and method of its own. It is now, for the first time, that the questions, by their philosophical treatment, enter upon a practically new sphere. The general principles are transformed. The experiences of the external and of the internal, otherwise divergent, can now be united in a whole. Philosophy ceases to be an appendage to other sciences, a mere crowning of the structure, or a rendezvous for the fancies of the common understanding: it becomes rather the science of sciences, which forms properly the very soul of all knowing activity, and gives it its inner unity.

But, from the standpoint of Empiricism, such an independent task for philosophy, and hence philosophy itself as a unique science, can not be consistently maintained. For a part of the concept of a science is that of a systematic combination of acts of knowledge under general principles, and also that of a specific method. The Empiric, however, must either adjudicate to philosophy the mere grouping of the results of the other sciences, or else limit it to the observation of psychical occurrences as a specific province. In the first case, we should have no science at all; in the second, at least, no central science of principles. But modern Empiricism does not seem in a single instance to advance a claim to a peculiar method for philosophy, for it professes only those methods which we are accustomed to regard as belonging to the natural sciences. Yet the renunciation

* So the special manner in which this philosophical problem is treated in any period of time is closely connected with the distinctive peculiarity of the scientific work of that time.

of philosophy as an independent science can not well be expressed more frankly than in such a renunciation of its peculiar method.

Answering to this description, then, modern Empiricism, judged by what it has hitherto attained as positive * results, has made little advance beyond a new formulation and hypothetical extension of facts of knowledge in natural science. As soon as it deviates from the territory of the natural sciences, it finds itself referred to the common sense of men ; and so we can well say, without being unfair, that, if Empiricism contains science as well as philosophy, the two can not harmonize. What is here science is not philosophy, and what is philosophy is not science.

Corresponding to this view, the influence of Empiricism on the thought-activity of the present day is due less to its specifically philosophical productions than to tendencies of a general character. The most prominent cause is a distaste for all speculative and systematic philosophy, which was first turned against Hegel and the Constructive thinkers, and then extended far beyond this exciting occasion. It is not so much a clear judgment as it is a confused feeling which lies at the bottom of such an agitation. It is the antipathy to an abstract and purely formal knowledge ; to the forcible construction of a system out of concepts claiming to be pure, and in truth often devoid of meaning ; to the whole estrangement of philosophy from the positivity of material phenomena. This reproach may be aimed especially at Hegel ; it applies essentially to all modern systematic philosophy, with the exception of Kant.

* In general, a negation has far more weight, and the Empirics can not be thankful enough to the Constructive philosophers for their aberrations.

Pervasively, and to an increasing extent in modern philosophy, all existence was reduced to the operations of the understanding, and all positive content of the material world more and more dissolved. The opposing reaction has now entered ; the thirst for a real and concrete cosmology has become powerful ; and, since it finds no satisfaction in philosophy, it has turned against it, and favors every view which does homage to the immediate phenomenon.

The tendency which leads to this change we consider fully justified, and we rejoice in it most heartily. But, if it would obtain significance and permanence, it must win for itself a place inside of philosophy, and must not remain stationary within the prejudices of vulgar impressions. As matters are situated at present, all possible elements are mixed together ; all that is in general opposed to idealistic tendencies is united to fight against, not this or that philosophy, but against all systematic philosophy. To defend philosophy from such attacks is to degrade it. The final question is not how the age judges philosophy, but how philosophy will judge the age.

Only in one point would we oppose a misunderstanding which has taken possession of scientific circles—the misunderstanding of the real province of metaphysics. The expression metaphysics has become one of those war-cries which do not allow the exercise of quiet reflection. All the odium that is attached to the abstruse, the arbitrary, and the empty, is heaped upon one such appellation, and the result is in this way rendered certain.

Now, the term metaphysics is certainly an unfortunate one, because it easily suggests the idea that it treats of a knowledge which is transcendental, and lies outside

of all experience. But a glance at history shows how little justification there is for making one single prominent thinker responsible for it—to say nothing of philosophy as a whole. Originated in a misunderstanding, then carried over from the Neo-Platonic to the Transcendental side,* the phrase, in the sense of Ontology, became a favorite with the Scholastics, and was also employed with favor in modern philosophy in the Wolffian school, where the Scholastic spirit was retained the longest. From this, and in fact without distorting it, Kant formed the concept of metaphysics, which he opposed. If, now, no thinker of any prominence has ever taken much pleasure in the use of the expression, we can easily see in that fact evidence that the deeper problem of philosophy is not affected by the attacks on “Metaphysics.” That upon which all systematic think-

* As is well known, the expression was originally derived from the order of the writings of Aristotle. As Gassendi conjectured, Andronicus of Rhodes, who arranged the writings of Aristotle, is to be regarded as its originator. Then the word was quickly adopted as the symbol of the science (*τὰ μετὰ τὰ φυσικά, ἢ μετὰ τὰ φυσικά πραγματεία*), which was finally understood by the Neo-Platonic Herennius as the science of that which is above nature (see Brandis, “Transactions of Berlin Academy,” 1831, p. 80: *μετὰ τὰ φυσικά λέγονται ἅπερ φύσεως ὑπερῆρται καὶ ὑπὲρ αἰτίαν καὶ λόγον εἰσίν*). The singular form, *metaphysica*, may have been derived from the translations of Arabian philosophers; it had already been adopted among the leaders of Christian Scholasticism. Moreover, in the middle ages, Metaphysics does not at all signify a science of the Transcendental; and, even for Wolff, Kant’s opinion of Metaphysics is not correct (see Kant, viii. 576). “The ancient name of this science, *μετὰ τὰ φυσικά*, already indicates the species of knowledge at which it aimed. One wishes, by means of it, to go out beyond all objects of possible experience (*trans physicam*), in order, wherever possible, to recognize that which absolutely can not be an object of the same.” The ancient metaphysics is rather, in connection with the Aristotelian metaphysics, the doctrine of the universal determinations of the existent; for which reason the name Ontosophy or Ontology was suggested for it by Clauberg (see “Prolegomena zur Metaphysica de Ente quæ rectius Ontosophia”).

ers, and especially those who opposed the Scholastic concept of metaphysics, have laid stress, is an independent doctrine of the principles of philosophy. The most that can be inferred from the expression metaphysics is, that this necessary problem has been falsely presented to certain minds, but not that it has itself gone astray. We can just as well say that the systematic philosopher investigates what precedes the special act of knowledge, that is, the general conditions of knowledge, as to reproach him with wishing to transcend the material world; but it is more correct to lay aside here all accidental definitions, and to measure the problem by what is essentially involved in its import.

The systematic philosopher does not wish to undervalue experience in any way; only he can not identify the propositions, "nothing without experience," and "everything from experience alone." In its proper position, experience will be valuable to him to the same extent that it is to the Empiric; only he believes that he can not renounce a further question.

Moreover, it is by no means true that he wishes to dislodge what is given in experience by the propositions at which he arrives. That remains, rather, uncontested in its place; only it can not serve, for him, as the ultimate point at which thought can arrive. But here philosophy has to suffer from the evil custom by which the results of investigation, instead of being criticised in their connection with the whole, are referred directly to the single phenomena. The philosophical solution, then, seems to wish to displace that which is evidently present in the phenomenon and, because common sense naturally thinks that nothing is more real than what a man sees and touches, the philosopher seems to be a Utopian and a dreamer, and every penny-a-liner believes

that he can in his sport overthrow the greatest scientists of all times. From such a reference of the results of philosophical investigation to the immediate phenomenon, in the realm of theory as well as of practice, proceeds especially the boasting of common sense over philosophy, which has not rarely excited the ridicule of thoughtful men. "In all ages," says Schelling (see "Works," ii. 19), "the most commonplace men have overcome the greatest philosophers with things which are conceivable even to children and minors. One hears, reads, and is astonished that such common things were unknown to such great men, and that men acknowledged to be so insignificant still could master them. No man thinks that, perhaps, they also knew them all; but how, then, could they possibly swim against the stream of evidence? Many are convinced that Plato, if he could only have read Locke, would have gone out from his presence in shame. Many a man believes that even Leibnitz, were he to rise from the dead and go to school to learn of him for an hour, would be converted. And how many fledglings are there who have not sung songs of triumph over Spinoza's grave?"

All such encroachments of common sense affect the systems, so far as those systems postulate for philosophical investigation an independent problem. The nearer the systems remain to the ordinary idea of the world, the sooner can they count upon being pardoned by that practical common sense. This usually grants to Empiricism a certain favor, which in truth its scientific defenders have not reciprocated. For the philosophical treatment of the present questions, this whole partisanship of the masses has no value at all. The transcendental and metaphysical problem is one which is everywhere so difficult, and presupposes so much scientific

and philosophical labor, and lies, moreover, so far away from the naïve idea of the world, that popular opinions have here about as much significance to philosophers as the vulgar ideas of the heavenly bodies and their movements have to astronomers.

But the confusion has at the present day forced its way out from the circle of unreflecting minds into that of scientific investigators. That the philosophical problem in its distinctive nature is not understood, is evident from the arguments for Empiricism which are asserted even by men who occupy a prominent position in the special sciences. Thus, for example, an argument for philosophical Empiricism is fabricated from the fact that, in the psychologico-physiological problem of the formation of our idea of space, the scale seems to turn in favor of the empirical rather than the intuitional explanation. But the two questions are radically different. In the one case we discuss the psychical production and development in consciousness; in the other, the ultimate origin. We might answer the psychological problem entirely in the sense of Empiricism, without being in the transcendental sense a philosophical Empiric. The identification of the two questions shows a decided misunderstanding of the Kantian philosophy, against which Kant has often expressly guarded himself. The very man who has most highly valued the originality of the forms of knowledge has carefully distinguished the problem of originality from the question whether these forms are to be regarded as ready-made and innately given, or as first developing themselves in the experience of life, and has unambiguously expressed his sympathy for what has since been called the empirical explanation.*

* Definite quotations will be given in the discussion of the concepts *a priori* and innate.

Further, the recent investigations in regard to the principles of geometry, from which it is concluded that our idea of space is determined from among other possible ideas, are understood as if the Kantian doctrines were overthrown by the knowledge of this positive fact, and the question were decided in favor of Empiricism, because that newly discovered property of the idea of space is learned only by experience. But, for philosophers, the question is not at all by what process we bring the judgments into our consciousness, but it is from what source they originally arise; and it is a very different thing to construct something by a process of pure thought, from conceiving it as produced by mental activity after it is known. Therefore the schools which defend the originality of the forms of thought do not in the least need to derive these from pure concepts; but they can admit without hesitation a specific nature which we first know through experience. Yet I should correct that expression. There can be no talk about an "admission," for it is by the systematic school itself that this fact of experience is first asserted. For Leibnitz, it was a peculiarly attractive and in his system important principle, to apprehend what is actually existent in every case as one of different possibilities. But, in Kant, one of the leading elements of his transcendental Idealism was the conviction that the definitive property of the intuition of space—as under three dimensions—could not be inferred from the general concept of space.* He would then have greeted with

* See ii. 410: "*Non dari in spatio plures, quam tres dimensiones, inter duo puncta non esse nisi rectam unicam; e dato in superficie plana puncto cum data recta circulum circumscribere etc., non ex universalis aliqua spatii notione concludi, sed in ipso tantum, velut in concreto, cerni potest.*"

especial pleasure the very investigations by means of which many men now believe that they could overthrow him.* And, in general, is there not, in the fact that the mind knows the peculiar forms of the sense-intuition as something specific, an advancement beyond their limits? Is it not one of the greatest triumphs of thought to be able to construct a geometry which is independent of the specific conditions of this very intuition?

With the Empirics, the demonstration of this point is always involved in darkness, for they appeal simply to the phenomenon as empirically known. But to test and to estimate the value of this is just the problem, yet the result of this testing may very easily be a transformation of the original phenomenon. Perhaps with some reason Leibnitz says (page 591 b): "Il leur paraît d'abord, que tout ce que nous faisons n'est qu'impulsion d'autrui; et que tout ce que nous concevons vient de dehors par les sens, et se trace dans le vuide de notre esprit, *tanquam in tabula rasa*. Mais une méditation plus profonde nous apprend que tout (même les perceptions et les passions) nous vient de votre propre fonds, avec une pleine spontanéité." At all events, however, all that scientific labor can obtain by way of results—that is, all that it can prove in relation to the development and the positive character of our mental products—can be entirely recognized and fully esteemed by a systematic philosophy. According to our conviction, it

* Whatever position one may assume in other respects, in relation to this problem, the question of the origin of mathematical knowledge in general is not decided by it. We should be curious, for example, to see the concept of pure quantity derived from experience—if one does not stop short with empty words, as, for example, "abstraction from what is given." For how is such an "abstraction" possible?

can find the full realization of its principles only in such a philosophy.

There is already sufficient confusion of concepts; but even this is increased by the favorite way, in certain circles, of representing the opponents of Empiricism. It appears, according to the expressions of many, as if no supporter of a systematic philosophy could be anything else than the friend of a system which constructs it out of concepts in the style of Hegel: by which view, again, the picture of such a philosophy is wantonly distorted. But, however one may judge Hegel, by what right are others made responsible for his principles? Shall we have in philosophy, too, such a doctrine of imputation that all must atone for the sins committed by one? or are we, non-empirics, supposed to allow ourselves to be set back into the middle ages, and, by the command of the Empirics, to be robbed of the privilege of learning something from the mental progress of modern times? Further, without regard to any historical connection, care must be taken that every one who defends an independent significance of philosophy as systematic science is not put down by the great mass of men as confused, fantastic, and incomprehensible. Even Leibnitz was compelled to rebuke the rudeness, introduced by Locke, of designating anything removed from one's own thought-process as incomprehensible,* and so of pushing it aside. He characterizes this style of

* As opposed to this, the dilettant Empiricism gladly uses as a weapon the "self-evident"—an inadequate means in the contest for truth. For this which is self-evident either belongs to the sphere of the naïve intuition of the world, which itself in turn becomes the problem of science, or it is only that which is unconsciously received as the result of previous scientific processes. Most of the advances in the knowledge of the world, in respect to principles, have proceeded from the point where a man began to doubt something "self-evident."

reasoning appropriately, when he says (451 a): "*Je remarque souvent que certaines gens tâchent déluder ce qu'on leur dit par cette affection d'ignorance comme s'ils n'y entendaient rien ; ce qu'ils font non pas pour se blâmer eux mêmes, mais ou pour blâmer ceux qui parlent, comme si leur jargon était non intelligible, on pour s'élever au dessus de la chose et de celui qui la débite, comme si elle n'était point digne de leur attention.*"

It can be added to this, that he who fancies that he can treat the question so cavalierly gives up all community between different kinds of scientific labor.

If, after all this, one imagines the picture which many men make to-day of the "metaphysicians"—those men who rashly, without a compass, steer out beyond all the limits of experience, and who, disinclined to earnest effort, wish to seize by a bold flight of the imagination that which can be obtained only by earnest effort, and who in this way boast of their superiority to those who actually labor—if this picture is true, it seems as if we could feel only detestation of an outrage so gross, and could not guard ourselves too strongly against the men who share in it. But now, if one looks more closely at the company of these non-empirics and anti-empirics, he finds not only men like Plato and Plotinns, Spinoza and Hegel, but also Descartes and Leibnitz, Kant and Herbart—in short, nearly all the men who have had any significance in philosophy; and I fear there will always still be many who prefer, in the company of such men, to be condemned by the high priests of common sense, rather than to share with them the favor of philosophical dilettanteism, which they prize so highly.

But enough of joking: we should not anticipate the serenity which subsequent centuries will feel in the con-

sideration of this sprawling, prosily earnest dilettanteism, which plays the schoolmaster over great problems and great men indifferently. We would rather simply, from one point of view, protect our presentation of the subject from an undesirable misunderstanding. Among the men devoted to philosophical investigation are many usually counted as Empirics, who could with reason shield themselves from our representation of their school. We see these men busied with concrete and weighty problems, in thoughtful and critical labor—a labor which commands our highest respect, and which, in its results, brings nearer together those who at the outset are situated far apart. Perhaps such men will allow us to use here Fichte's expression: "He who finds what we say superfluous is not one of those for whom we have said it." What we really oppose is, that anti-philosophical tendency in popular thought which rejects the great problems of thought and endeavor because it does not understand them; which denies to the mind all independent and formative force in the world, and which, nevertheless, wishes to assume a philosophical garb, in order, with the appearance of right, to make a virtue of their deficiencies.

To oppose such tendencies in a directly scientific way is impossible. But all engaged in philosophical investigations, without distinction of party, should combine in defense of the independence and greatness of philosophical science, and of its significance in the system of knowledge at which mankind aims. This significance is not measured by the sum of single dogmas, which can be demonstrated to every one, nor by the wonderful discoveries at which the common understanding is astonished, but by the fullness of mental power which is developed by such discoveries, by the

tendency of this mental power to valuable ends, and by the general elevation of the level of mental and scientific labor which is thus accomplished. That such benefits may be preserved, it is necessary to hold fast to the complete greatness of the problem, even if we have to-day so little faith and so little power to advance in its solution. "For fire is not extinguished everywhere because it is extinguished with you";* and the ultimate aims of mankind can not in any way be made dependent upon the humors of the day.

But—and this is what especially concerns the act of knowledge—we assert that a systematic philosophy is justified by the fact that only by means of this is it possible to vouchsafe a free investigation of phenomena as they occur, to make experience itself a problem, and to avoid stamping what is from the outset contingent as something necessary. Hegel has repeatedly brought out conspicuously the fact that the knowledge of a limit points at an inner advancement beyond that limit; but the proposition also admits of the inversion, that we must be beyond a limit in order to be truly conscious and mindful of it. In order, then, to be thoughtful and circumspect in our investigations within experience, there is need of a philosophy which does not end with experience.

* Plotinus, 205: ἐπεὶ οὐδ' ἀποσβεννυμένου τοῦ ἐν σοὶ πυρὸς τὸ ὕλον πῦρ ἀπέσβη.

A PRIORI—INNATE.

Ubique in natura aliquid agitur.—KEPLER.

THE problem of experience involves the concept of the *a priori*. In the modern use of this concept there is a great deal of obscurity, and it may require a somewhat exhaustive historical treatment to clear away that obscurity. The expressions *a priori* and *a posteriori* refer back, ultimately, to Aristotle's custom of calling the universal the earlier (as a concept), and the particular the later; * but this usage was not fully established until the last half of the middle ages.

In Albertus Magnus we find the antithesis between knowledge from causes and knowledge from effects expressed by the phrases *per priora* and *per posteriora*. *A priori* and *a posteriori* first occur, according to Prantl, in Albert of Saxony, a scholar of the fourteenth century.† These expressions continued to be used as understood in the middle ages, until, in the seventeenth century, Luther (see "Tischreden," Förstemann's ed.,

* See chap. ii. of Book Δ of the "Metaphysics"; also Trendelenburg, "Elements of Aristotelian Logic," § 19.

† Prantl ("History of Logic," iv. 78) adduces the following passage where the expression does not indeed seem to enter exactly as a new one: "Demonstratio quædam est procedens ex causis ad effectum et vocatur demonstratio a priori et demonstratio propter quid et potissima; alia est demonstratio procedens ab effectibus ad causas, et talis vocatur demonstratio a posteriori et demonstratio quia et demonstratio non potissima." Hence knowledge by induction is more often opposed to knowledge *a priori*.

iv. 300) translated *a priori*, "from what precedes" (*von vornen her*),* *a posteriori*, "from that which follows after" (*von dem was hernach folget*). Men like Kepler, Hugo Grotius, Descartes, and Spinoza employed the terms as established scholasticisms, but the last evidently felt that they were obsolescent, and direct attacks upon them were not wanting.†

But a change in the use of the concepts began with Leibnitz, although, in fact, as was uniformly the case in his writings, the old usage almost concealed the new. He recognized *a priori* knowledge as knowledge from causes; but because, for him, ultimate causes lay in the reason itself, the expression began to denote such judgments as have their origin in the knowing activity of the mind, and thus involve a complete correspondence of the ground of the knowledge with the cause of the thing. *A posteriori*, as opposed to this, denoted the knowledge which comes from experience.‡

* Still this usage was a frequent one in the preceding century.

† Gassendi holds, for example, that the meaning of the words can be simply converted, since *a posteriori* knowledge is the earlier and more certain, and itself produces *a priori* knowledge. See "Exercitationes parad. adv. Aristoteles," v.: "Quocirca non immerito quispiam existimaverit, cum omnis notitia (et proinde demonstratio) quæ dicitur a priori pendeat ac petatur ex ea, quæ haberi dicitur a posteriori, necessarium esse hanc semper haberi et evidentiorē et certiorē illā."

‡ *A priori* is found in Leibnitz, Erdmann's ed., 80 b, 99 a, 272 b, 393 a, 451 b, 465 a, 494 b, 515 b, 740 b, 778 b; Foucher, i. 38, ii. 184, 253, 357, 361. In 778 b, the "philosophie expérimentale qui procède *a posteriori*" is contrasted with the knowledge through "la pure raison, ou *a priori*." The peculiarity of the new signification appears most clearly in 393 a: "Particulièrement et par excellence on l'appelle raison, si c'est la cause non seulement de notre jugement, mais encore de la vérité même, ce qu'on appelle aussi raison *a priori*, et la cause dans les choses répond à la raison dans les vérités." (Yet this passage belongs to the "Nouveaux Essais," which, as is well known, was a later production.)

This new signification struggled at first with the old one; but the change corresponded so well with the general tendency of philosophy, that there was no doubt of its ultimate success. Accordingly, in Wolff and his school, *a priori* and *a posteriori* denoted the antithesis of rational and experiential knowledge; but the keen distinction of principles in this antithesis, which had been introduced by Leibnitz, was again lost. For, by this school, every judgment is called *a priori* which we obtain by pure inference from facts of knowledge already held in the mind, without passing judgment upon the ultimate origin of this knowledge.* Wolff thus falls back again in this respect into Scholasticism. In the earlier writings of Kant, in contrast to this, we find in different places a keener comprehension of the problem, which approximates to the position of Leibnitz rather than to that of Wolff;† but the concept of a knowledge free from all experience was first distinguished with complete clearness by Lambert.‡ A similar though less precise meaning is found in Hume;§ and in many ways a preparation was thus made for the

* See "Psychol. Empirica" (in which, more than in all the other productions of Wolff, these expressions are employed and explained), § 434: "Quod experiundo addiscimus, a posteriori cognoscere dicimur: quod vero ratiocinando nobis innotescit, a priori cognoscere dicimur." § 425: "Quicquid ex iis colligimus, quæ nobis jam innotuere, cum ante ignotum esset, id ratiocinando nobis innotescit, adeoque idem a priori cognoscimus." See also § 461.

† See, for example, ii. 134, 145, 136, 366, 386.

‡ "Neues Organon" (appeared in 1764), Dianoiol., § 639: "We wish, then, to assume that absolutely, and in the strictest understanding of the term, only that can be called *a priori* in which we owe absolutely nothing to experience."

§ See "Philosophical Essays," iv.: "If we reason *a priori*, and consider merely any object or cause as it appears to the mind, independent of all observation."

later Kantian interpretation, according to which the *a priori* denotes what belongs originally to the mind.*

But this Kantian principle served in turn as the starting-point of new developments of the concept. When the Constructive philosophers attempted to overcome the dualism of Kant's doctrine, and undertook to develop the whole world out of the activity of the mind, they referred the *a priori*, throughout, to this activity; and, according to the position which they everywhere assigned to mental activity, they could understand the antithesis of *a priori* and *a posteriori* as the consideration of things, not as arising from ultimately distinct sources of knowledge, but from different ways of viewing them. When things are considered as produced by the necessary activity of the mind, we have a general knowledge *a priori*; when they are considered as met with ready-made, and hence contingent, we have a special knowledge *a posteriori*: a definition which encounters all the doubts to which such a Constructive philosophy is exposed,† and which naturally calls out the rejoinder, as, for example, among the Positivists, that the *a priori* is supposed to express something arbitrarily set up without regard to what is actually true, and thus something only subjectively valid.‡ And

* Yet, in fact, he frequently uses *a priori* in a looser sense.

† See Fichte, ii. 355: "The scientific doctrine, without any regard to the perception, derives *a priori* that which by virtue of it appears even in the perception, and so *a posteriori*. Thus these expressions do not denote different objects, but only a different view of one and the same object; somewhat as the same watch is used *a priori* in the demonstration of it, *a posteriori* in the actual perception." On a closer examination, many differences between single thinkers appear here; and in this concept one could point out the finer distinctions between them, as well as the gradations of development in individuals.

‡ Bourdet, "Vocabulaire des principaux termes de la philosophie positive" (1875), p. 129: "Il y a plusieurs méthodes: 1, la méthode *a priori*,

then, finally, in most recent times, on the side of the Darwinian scientists, the *a priori* is identified with the innate, but in this sense is regarded as something inherited. The individual does not obtain everything from experience, but what he receives from his ancestors is, in ultimate analysis, formed by them from experience; so that all *a priori* knowledge is resolved, essentially, into that which is *a posteriori*.*

The history of the concept thus reflects the history of the struggle over the doctrine of knowledge. All the different forms which the concept has assumed have left traces behind them; and on the modern usage the Scholastics and Leibnitz, Kant and Hegel exert an influence in confused combination. Kant's influence predominates only so far as the question of the origin of knowledge is joined to this concept, at least as used in science—the question which, in the problem whether knowledge is innate (*eingeboren*)† or obtained from without, extends through the whole of philosophy. Hence, all the difficulties and misunderstandings which are involved in that problem are centered to-day on the concept of the *a priori*.

At all times, the specific question was whether knowledge originated from within the mind‡ or came métaphysique ou subjective, dans laquelle les propositions qui servent de point de départ, au lieu d'être déduites de l'expérience, sont et restent purement rationnelles."

* See Häckel, "Natural History of Creation," 4th ed., p. 636: "Knowledge *a priori* has arisen only by long-continued inheritance of acquired tendencies in the brain, from what was originally empirical '*a posteriori* knowledge'."

† *Angeboren* must, for this concept, be unconditionally rejected. It is not suitable to use here the *an*, which expresses what comes from without, and remains on the surface. (See Grimm's Dict.: "*an* denotes the surface.") Paracelsus used *eingeborn* in the sense desired here.

‡ The prominent thinkers even of the middle ages always used the

to it from without. As to the general principle, it was the conviction of most of the prominent thinkers that an essential and inner relation of the mind to the objects was presupposed in an adequate and legitimate * knowledge. But the specific application of this gave rise to an infinite number of disputes and errors. The subjective appeared as something received in a state of completeness, held by the memory and preceding all activity. In the very beginning of the discussion, Plato always failed to distinguish carefully enough between what is contributed by the form of an idea and what is furnished by the contents of a concept; and, as a result of this, criticism began with Aristotle, who recognized only a *δύναμις σύμφυτος κριτική* (see Anal. Post. 99 b, 35), and when discussing the mind purposely used, not the customary Platonic *ἐμφυτος*, but rather *σύμφυτος*.

But the philosophic contrast which these two men present extends through the whole of philosophy. They agree essentially in the belief that knowledge involves an independent activity of mind;† but the one limits this activity wholly and completely to the phenomena of life, while the other believes that all which happens here is conditioned and determined by wider connections and deeper relations. This Platonic doc-

expression "innate" (*innatus*) with great caution, and with care to avoid misunderstandings. See, for example, Roger Bacon, "Specula Mathematica," i, 3: "Mathematicarum rerum cognitio est quasi nobis innata.—Cum sit quasi innata et tanquam præcedens inventione et doctrina; seu saltem minus indigens eis, quam aliæ scientiæ."

* See Plotinus, 481: "Ἐρμῶν δὲ τῶν ἄλλων θεωρημάτων οὐ δεῖ νομίζειν. εἰ δὲ μὴ, ἔσται οὐκέτι τεχνικὸν οὐδὲ ἐπιστημονικόν, ἀλλ' ὥσπερ ἂν καὶ εἰ παῖς λέγοι.

† The Aristotelian idea of a *tabula rasa* (the Latin expression, according to Prantl, iii. 261, appears first in Ægidius Romanus) is often completely misunderstood.

trine was naturally far more exposed to misinterpretations and to the intrusion of pictures of the fancy. We always see the concept grow feeble whenever there is a diminution of philosophical force.

To unphilosophical thought, it is almost a matter of course to assume that everything within the mind comes from without, so that even schools which respect the independent activity of the spirit easily introduce the opposite theory in some other form. For is it anything more than another kind of Empiricism, if we regard as introduced in the beginning that which apparently is not explicable by experience, and continue to hold every state, as often as it is renewed, as something transferred from without?

But the concept of a perpetual activity is as perplexing as is that of an inner activity. Men are so accustomed to regard rest as the normal condition, and activity as a disturbance of the same, that, throughout, what happens uniformly is identified with rest; and, in place of a continual action of the mind, some kind of property or disposition, or something else that is "given," is assumed. Hence, as philosophy has always attempted to give verbal expressions to its concepts, common usage has constantly transferred these expressions into the sphere of popular thought. In *innatus* and *angeboren* no one thought at first of heredity.* The theologians considered the original sin (*peccatum originale*) an inherited sin (*Erbsünde*).† "Actual" and "actuality" served from the outset (as *actualis* and

* See, for example, Lucretius, who first introduced *innatus* into philosophy, ii. 286; Eckhart, 434, 26 (daz ist ime [dem steine] angeboren).

† Tertullian and Augustine use the phrase *peccatum originale*, and have in mind a tendency to evil, always produced anew by sexual propagation; but Ambrose has the concept of inheritance, which Kant rightly characterizes as, in this case, the most unsuitable of all expressions.

actualitas since Duns Scotus) as a substitute for the Aristotelian concept of *ἐνέργεια*,* until they were by degrees simply substituted for existence.

The succeeding philosophy, which limited all being by activity, and restricted this activity to the phenomenal world and to life, contested alike the Platonic theory of knowledge and the determination of knowledge by external things.† Every great section of its history is marked by the prominence of this characteristic. Nicolaus Cusanus thus not only rejected innate ideas, in the sense of the Platonics, because he was willing to admit only a *vis concreata* (see "Opera," i. 92 b) and a *judicium concreatum* (i. 83 b), but also opposed a doctrine of inheritance;‡ every mind is to him an independent living mirror of the universe.§ Descartes did not, indeed, disdain the unfortunate phrase "innate ideas"; but he has in many places brought out the fact distinctly that he does not understand by it anything ready-made in the mind;|| and it seemed inconceivable to him that

* Thus "actuality" (*Wirklichkeit*) in Eckhart, who coined the word.

† When Proclus (Creuzer, i. 281) says: οὐκ εἰσιν ἄγραφα γραμματεῖα δεχόμενα τοὺς τύπους ἔξωθεν, ἀλλὰ γέγραπται μὲν αὐεῖ, καὶ ὁ γράφων ἐν ἑαυτῷ ἐστι, the later philosophy would substitute *γράφεται* for *γέγραπται*.

‡ II. 187 b: "Si anima esset a generante, omnia opera ejus essent naturalia et nullum morale opus posset habere" (where *morale*, according to the customary usage of the middle ages, means inner).

§ II. 103 b: "Nominamus intellectum virtutem illam quæ ex se ipsa generat et producit sicut principium motus." This is the most proper reference for the thought indicated, but is too extensive to be quoted here in full.

|| Of the different passages which can be adduced in support of this, I present only the one which seems to me to be the most significant—"Ad Vœtium," viii.: "Notandum est eas omnes res, quarum cognitio dicitur nobis esse a natura indita, non ideo a nobis expresse cognosci; sed tantum tales esse, ut ipsas absque ullo sensuum experimento ex proprii ingenii viribus cognoscere possimus." The "Notæ ad Programma" are also especially important.

the mind, as a thinking being; should have arisen from without.* Kant, finally, in the famous dissertation, expressed himself against the innateness of the ideas of Time and Space.† The intuitive originality of knowledge was one of his leading principles; and, if he did not present clearly enough the definition of mind, as a pure and incessant activity, this concept is asserted all the more distinctly by the Constructive philosophers. In no case can we read into Kant the doctrine of judgments ready-made in the mind.‡

But I see the question facing me, Why has so much historical material been heaped together here? My only object is to show that the tendency, not rarely seen at the present day, to identify the *a priori* with the "inborn" is not suited to the great problem of knowledge; and that it has not accepted (to say nothing of advancing) the results of the historical development of the concept.

If it is absurd to combine the idea of innateness

* See Ep., i. 119: "Nequeo animum inducere quod illi me fecerint quatenus ego me considero ut cogitans quid," *et seq.*

† II. 413. He says in relation to Time and Space: "Conceptus uterque procul dubio acquisitus est, non a sensu quidem objectorum (sensatio enim materium dat, non formam cognitionis humanæ) abstractus, sed ab ipsa mentis actione, secundum perpetuas leges sensa sua coordinante, quasi typus immutabilis ideoque intuitive cognoscendus. Sensationes enim excitant hunc mentis actum, non influunt intuitum, neque aliud hic connatum est, nisi lex animi, secundum quam certa rationis sensa sua e præsentia objecti conjungit." (P. 400.) If the law appears here as something established before the action, later on all is resolved into the activity itself.

‡ See vi. 37: "Criticism allows absolutely no imprinted or innate ideas. It assumes that they all, taken together, are received, whether they belong to the intuition (*Anschaung*) or to the concepts of the understanding. But there is also an original acquisition (as the teachers of natural rights expressed it): consequently, what before did not exist at all does not of course belong to anything before this action."

with the old doctrines of innate ideas, it is decidedly still more so to construct a defense against such identification. We speak of innateness in the transmission of specific properties, and we to-day ascribe much more than formerly to such a transfer. But we do not in this way reach that *a priori* which denotes the original and essential vital activity of the mind, and, more particularly, the activity of knowledge. Modern philosophy assumed such an activity as necessary, because it held it to be irrational to posit a substance without according to it some original activity. Moreover, as we have seen, modern science devises the concept of substance from the principle of activity, while the assumption of a substance which is empty and inactive carries us back to the worst periods of Scholasticism. In connection with this, we might ask, in the case before us, what then the thing is to which the inheritance was made, how it in general comes into activity, and how it declares itself to us. If we once admit that absolutely everything comes into the mind from outside, there is neither sense in nor authority for ascribing to the spirit a peculiar existence; it would be much more commendable in that case to admit, in consistent materialism, the production of the mind by external agencies, and to deny to it all independent existence. And, then, how should anything originally empty and inactive appropriate to itself whatever might come from without? These are all questions with which we shall deal later in the discussion of development. The only thing to be done here is to protect from misunderstanding the concept of the *a priori* taken in its philosophical sense.

In the contest over this concept, the question is not about something known previous to experience; for it deals with a relation, not of time, but of concepts, and

hence not with the historical commencement, but with the original causes of knowledge. Just as little do we dispute about a something ready-made in the mind, for we recognize here only a striving activity. Moreover, no assertion is made of a judgment obtained, without any experience, from the pure activity of thought, since the mind arrives even at its self-consciousness only by the aid of an empirical activity. But we discuss as the main question, not only of philosophy but of all science, and of psychology especially, the fact that in mental activity something essential, original, and legitimate is recognized. It shows that one is behind the times in his knowledge of modern philosophy, if he presents the dilemma whether knowledge is furnished ready-made in the mind or is created from without, for he thus leaves out of consideration the question to the development and defense of which the most prominent thinkers of the last century have devoted their strength.

IMMANENT (COSMIC).

O quam res est contempta homo, nisi supra humana surrexerit.—SENECA.

THE antithesis at present current between immanent and transcendent originates with Kant.* Until his time, *immanens* (*permanens*) and *transiens* were contrasted, the *actio immanens* being an activity which remains within the subject, and the *transiens* one which goes out beyond it.† A similar distinction was made also between a *causa immanens* and a *causa transiens*; and the only new thing in the famous remark of Spinoza, “Deus est omnium rerum causa immanens, non vero transiens,” is the negation, by which, in fact, the whole idea is essentially changed. This use of terms can be traced back to the thirteenth century, and has not to-day entirely disappeared from scholarly works.‡

The expression transcendent was technically used in the last half of the middle ages for the most universal

* See iii. 245: “We will call immanent those first principles the exercise of which is restricted wholly within the limits of possible experience, but transcendent those which are supposed to fly beyond these limits.”

† See Goelenius, “Lexicon Philosophicum,” under “Actio”: “Actio est immanens (seu ἐνέργησις) agentis intra se, transiens (ποίησις) agentis extra se.” Eekhart says (101, 15): “Lîpliehiu dinc diu sint ûzwürkende, geistlichu dinc sint inwürkende.”

‡ See, for example, Volkmann, “Treatise on Psychology,” 2d ed., ii. 450.

definitions, which, according to the Neo-Platonic doctrine, are superior to the categories, and are adapted to all kinds of being. The four concepts, *ens*, *unum*, *verum*, *bonum*, were at first accepted; later, *res* and *aliquid** were added; and in this form the theory was handed down. The word *transcendentalis* came from its use in the phrases *veritas*, *unitas*, etc., *transcendentalis*. But by the time of the transitional period the whole doctrine had been thoroughly weakened by the numerous attacks upon it, and the expressions were used in the seventeenth and eighteenth centuries in the most various ways, and with great arbitrariness, until at last they were firmly fixed by Kant.

So far as the concept is concerned, the tendency to an essentially immanent cosmology is common to all forms of modern philosophy and science; all are agreed in opposing the method of the middle ages, which reduced the events of the world to a supra-mundane and extra-mundane cause. This was not simply an inference from a theoretical principle; but everywhere man, estranged from the world by previous cosmologies, turned back to that world again, vigorously and joyfully, to act and to create in it. He had again obtained confidence in himself and in the world, and felt strong enough to get along without any apparently foreign assistance. As a matter of science, this immanent tendency attained its classical expression in Spinoza, who, above all others, possessed that intellectual strength of character which can present thoughts, of the truth of which one is convinced, according to their pure contents, without confusion, and without enervation, and so can reveal the secret meaning of them all. But the powerful influence of Spinoza's doctrines was due to

* See Prantl, iii. 245.

the fact that they seemed self-evident, and yet, from the historical standpoint, opened out decidedly new paths of speculation.

For how could man, by any exertion of thought, ultimately carry himself beyond the limits of the world (in its widest philosophical sense)? Although he creates the supra-mundane, still can he put into it anything except what comes from this world? Yet, self-evident as this seems, there is undoubtedly some danger involved in this process. When such a supra-mundane entity is once formed, it frees itself from its connections; it appears to be something set over against the world; and, as such, it is easily employed for the explanation of material events in general, or of any single occurrences which appear peculiarly enigmatical.

But since, on this theory, the intrinsic connection of phenomena under the causal relation is lost sight of, and we no longer resolve phenomena back to that something which is essentially contained in them (which resolution constitutes the definite problem of knowledge), it seems as if such a transcendent explanation not only here and there broke through the scientific conception of the world, and in general limited it, but also, as if, in principle, it destroyed such a scientific conception. Such an explanation is to be banished all the more decidedly, the more it gives the appearance of science by its reference to something supra-mundane, and by that appearance lulls to sleep the impulsive desire for actual knowledge.

Who would wish to mistake the truth contained in such propositions? The theory of our relation to the world which was predominant in the middle ages is made for ever impossible by modern science; and, if religion were bound to an external supra-mundane interpretation, there would arise, of course, between it

and science an irreconcilable antithesis. In any case, the immanent character of its explanation of nature is essential and necessary to the whole of modern science, so that every attack upon this claim is to be regarded as an attack upon science itself.

But now the question arises, What then, more exactly, is to be understood by an immanent explanation? That causes are to be presented as manifesting themselves in the world, and that every kind of individual is to be understood in connection with the whole, and according to universal laws—this can be first of all asserted; but we must insist upon it that, if statements of this kind are to have any sort of valuable meaning, it must be clear what the specific meaning of the word “world” is. But here we find ourselves before an immense problem. For, however simple this concept may appear to the common sense of men, a brief glance at its history shows that it is not so simple in the realm of science. Every great system has its own concept of the world, and the great epochs of history show throughout, in this respect, distinctive characteristics.

To the ancients, the concept of the world was, first of all, that concept which embraced everything; it included everything mental and material, ideal and sensitive, divine and human, actual and possible.* Only at a later date, and under the influence of Christianity, was the concept of the supra-mundane formed.† There was

* See, for example, Seneca, “Nat. Quæst.,” ii.: “Omnia quæ in notitiam nostram cadunt aut cadere possunt, mundus complectitur.”

† Ὑπερκόσμιος and the contrasted ἐγκόσμιος are used in Pseudo-Archytas (see Mullach, *Frg.* i. 574 b, 6). In Proclus the antithesis of ὕπερκόσμιος and ἐγκόσμιος appears, after (in Plotinus) the ancient concept of the world had been essentially changed. It is worthy of note, also, that the Neo-Platonics opposed the νοητά to the ἐγκόσμια, and so understood the Intelligible as something supra-mundane.

accordingly no antithesis between what is within and what is outside of the world, which could be used in the cosmology. In fact, nothing could come in from outside; yet, in such an extension of the concept of the world, the supra-mundane was excluded far less than is the case in modern times. But the interpretation held at the height of Grecian thought, which found its expression in the denotation *κόσμος*, is definitive of the meaning of the term world.* The world, thus considered, is a whole, compounded, shaped by art into a living form, a *σύστημα* in the nomenclature of the Stoics. The single parts do not simply stand near one another, bound together, perhaps, only by their participation in some law, but each one has a place and signification as a part of the whole, and receives by that participation a specific determination. This idea influenced the investigations of the leading thinkers, and especially of Aristotle, even in regard to single objects. For example, specific forms of action are supposed to differ according to their position in space, and in a measure even in time, so that the glance is always directed from the individual to the whole. But that what is human, as well as everything else which is particular, is dependent on the great order of the world, is from the outset taken for granted, and is perhaps more emphatically sanctioned by no one than it is by Plato,† who certainly was inclined to value as highly as possible the ideal meaning of the human life. Ultimately, then, the Gre-

* The philosophical use of the word is, as is known, traced back to the Pythagoreans; but this signification does not seem to have been in general use in the time of Xenophon (see "Memorabilia," i. 1, 11: *ὁ καλούμενος ὑπὸ τῶν σοφιστῶν κόσμος*). Aristotle was the first to use *κοσμικός*. Pliny, "Nat. Hist.," ii.: "Quem *κόσμον* Græci nomine ornamenti appellarunt, eum nos a perfecta absolutaque elegantia mundum."

† See "Philebus," 29 B.

cian world separated into two parts, one purely mental and one endowed with sensibility, so that the cosmic theory was compelled to fall back upon something which, although not in itself externally transcendent, was still so as far as the concepts were concerned.

In Christianity, the world, as the sum total of all creation, naturally took the second place. In so far as whatever was created was considered as having fallen away from its destiny, the terms world and worldly could be used to signify that which was not taken possession of by and which offered resistance to the divine spirit.* But the phenomena of the world, as thus defined, received harmonious connection and significance only when they were referred to the ethico-religious problems of the human race, and its events consequently became of value only by reason of this reference; but in the realm of ethics there was a consciousness of an immense chasm between being and duty, and everywhere a clearly defined feeling of personal powerlessness in view of the inconsistency therein involved. All that the world in general offered could not be sufficient here: only from something supra-mundane could help be expected. It was involved in such a theory that God should be contrasted with the world as something outside of it, and that his action should be considered as something distinct from, and so exercising an influence upon the world. To the world, once created, was adjudicated a kind of internal conformity to law, and the divine influence was reserved for extraordinary cases. But, directly or indirectly, every occurrence was referred ultimately to a miracle: everywhere we stumble upon something not

* Augustine, "Opera," iii. B, 568 c: "Christus missus est ut mundus ex mundo liberaretur."

furnished by considerations of reason, concealed designs, confused relations, etc., so that world and nature still remain mysterious, however far we may carry our investigations. Science seemed almost to have as its chief task to bring into consciousness human impotence as contrasted with the divine omnipotence, from which it happened that inferior minds, in their irrational endeavors, the less they could demonstrate their own greatness, were the more inclined to show constantly the greatness of God (see Lichtenberg, i. 279).

Men of a speculative turn of mind, carrying out an independent line of theoretical speculation, went further still in their analysis. What to others seemed to lie by the side of and above the world, was to them the deeper cause, essence, and force of the world itself. The antithesis of natural and supernatural they adopted in very much the same sense as that in which we use it; but they held that man forms an integral part of a whole which is to himself unfathomable. Yet in Augustine, who was the greatest of the Christian philosophers,* such principles are inseparably combined with positively theological doctrines. The Mystics took a bold step in advance of this, and, apparently, came very near to the pantheistic systems of modern times. But there is a difference in their principles which is decisive of the whole method of investigation, for the Mystics derive the world from God, while our modern Pantheists, on the contrary, find God in the world. These earlier speculative principles were valuable, and exerted an important influence upon the historical development of thought, but they were not sufficiently independent to accomplish a scientific transformation of the ideal

* The expression *Christiana philosophia*, in a specific sense, was first used by Augustine (x. 408 c).

world as it appears to the naïve ethical consciousness, so that it was reserved for modern times to take up the struggle against it and produce the transformation.

The cosmic concept of the present day is, first of all, limited by the fact that, in general, only what is active is recognized as existent. By the supra-mundane which is excluded from the sphere of the Cosmos is especially to be understood whatever is not manifested in action; in this case, theology and metaphysics in the ancient sense alike disappear. But it is the task of positive science to reduce the heterogeneous elements in a phenomenon to continually demonstrable primary forces, and to derive their whole determination, under the principle of causality, from these simple elements. In such fundamental principles there is full harmony, whether the world is formed from the mind or from nature. In the former case, the progressive activity of thought is supposed to produce everything, and to support continually what is produced; in the latter, actively present forces, and not any feigned and unverifiable hypotheses, serve for the explanation. The former method can be traced back to Nicolaus Cusanus; in the latter, we find what Newton calls the *vera causa*, first formulated as a concept by Kepler, who sought to detect the secret of Nature herself, and to conceive of the cause as continuous force.* In Descartes both tendencies are combined, and they receive from him, under the modern doctrine of categories, a systematically philosophical foundation.

If, then, the world was to be recognized by the pri-

* See Apelt, "Epochs of the History of Man," i. 243. He was the first who discovered the art of asking Nature for her laws, while his predecessors only invented grounds of explanation, which they tried to fit to the processes of Nature.

mary forces acting in it, it was not, of course, immediately necessary to go beyond those primary forces in the investigation. And, if one still holds to the concept of God, the real meaning of the concept diverges so much from that of former times that only the retention of the old forms of expression conceals in some measure the actual change. That concept was formed for the purpose of giving to the world cause, unity, and connection, and this unification became the more necessary the more distinct single objects were made by the analysis of modern investigation. But these are all formal definitions—in a measure, subsidiary concepts, which thought creates to satisfy its own claims. This is seen especially in the fact that infinity is regarded as the most important characteristic of the concept of Deity. This infinity, as has been many times clearly shown, is not, of course, to be understood in a quantitative sense, but it expresses a concept of Being which is pure, limitless, superior to all determination and all limitation. But thus the concept of Deity has no other significance than to lend completeness and ultimate validity to the concept of the world.

We find, of course, much divergence in the views held concerning this general principle; yet even in Leibnitz, with whom there seems to be the greatest degree of connection with the earlier theories, on careful examination we find that the modern views are predominant. Though Leibnitz calls God a *supra-mundane Intelligence*,* he still understands by the world only particular phenomena, so far as they are associated without connection; and he presents, therefore, a dis-

* It is always worthy of notice that he prefers to say *supra-mundane* rather than *extra-mundane*. See 571 a: "*Dieu selon nous Intelligentia extramundana, comme Mart. Capella l'appelle, ou plutôt supramundana.*"

inction in concepts rather than a difference in essence. In its real meaning, Leibnitz's concept of God is far nearer to that of Spinoza than to that of Christianity.

But it can not be doubted that such a concept of God has no significance for the practical religious life, and it is, of course, equally worthless in any special science, because, in such scientific investigation, by common consent it can nowhere be used for the explanation of the particular event, and it appears as necessary only in the attempt to find a philosophical conception of the universe when regarded as a whole. Accordingly, such a concept puts an end to the theory of a transcendent religious derivation of phenomena.

This became evident even in the transitional period. Giordano Bruno found the difference between the devout theologian and the true philosopher in the fact that the one, in his explanations, ascended above Nature, the other confined himself within her limits.* Kepler shows the difference between his own conviction and that of his orthodox friend Fabricius, when he says (i. 332): "*Tibi Deus in naturam venit, mihi natura ad divinitatem aspirat*"; and when Spinoza identifies the concepts (*deus sive natura*) God and Nature (of course in the philosophical sense), and establishes only a single world, all that before this rational analysis had been justified as supra-natural must be removed as contra-natural.† The concepts of the eter-

* See "Della Causa, Principio et Uno," 4th Dialogue.

† See "Tract. Theol. Polit.," vi. 27: "Neque hic ullam agnosco differentiam inter opus contra naturam et opus supra naturam; hoc est, ut quidam aiunt, opus, quod quidem naturæ non repugnat, attamen ab ipsa non potest produci aut effici. Nam cum miraculum non extra naturam, sed in ipsa natura fiat, quamvis supra naturam statuatur, tamen necesse est, ut naturæ ordinem interrumpat, quem alias fixum atque immutabilem ex Dei decretis concipimus."

nity of being and of the legitimacy of all events displace such concepts as those of creation and miracle, and the immanent conception of the world receives here a typical form.*

But the world, which thus serves as that which is highest and unique, is then as a whole brought into contrast with the particular existence. The latter takes rank according to its worth in view of the world as a whole, and adapts itself to it in its forms of action. This makes it necessary that the whole method of consideration shall be different from the earlier methods. Nothing particular, even though, as in the case of man, it is the highest in what is empirically given, can refer all events to itself; for that was the very cause of the numerous mistakes of the past. Rather must every individual be judged by the whole. The speculative thinkers, who take this concept of the whole in its stricter sense, believe that everything individual can be, as a concept, discovered from the concept of the whole: all apparent contradictions disappear from the world, if the observer, to use Leibnitz's expression, fixes his eye upon the sun, and views things from this point. It is believed that the most difficult problems, even those of the thought-process, can be solved by such a change in the point of observation. But the whole, to which everything is subordinate, is not æsthetical, as in ancient times, nor ethical, as in Christianity; but it is

* So far as the expressions are concerned which serve to indicate the positions occupied by the different parties in religious philosophy, we find that they all belong to modern times. Naturalist and Deist extend back into the sixteenth century. In the course of the seventeenth and eighteenth centuries there were various attempts to distinguish between Deist and Theist; but the distinction made by Kant has been generally though not universally adopted. Pantheist was used by Toland in 1705; Pantheism by his opponent Fay.

supposed to be metaphysical, yet is in fact mathematical, whether of a geometrical or an arithmetical nature (Spinoza or Leibnitz). The individual accordingly serves ultimately only as an integral part of a magnitude; and, if everything is understood as thus homogeneous, there can be no longer a claim to any specific significance of the individual.

But, independently of such speculative attempts, there was a general conviction of the similarity of nature in all events. Time and space do not effect the least change in them, and in every point something pervasive and eternal can be apprehended. Everything apparently specific must reduce to something simple, and thus admit of a place in homogeneous classifications.

The prosecution of such tendencies necessarily changed the whole method of constructing a cosmology. With every external extension of the horizon, things appeared to move in their nature still nearer to man, for in everything was operative the law which ruled his own life. All concepts seemed to extend further out over the narrow circle which had been broken; and, since it escaped attention at first that the content must diminish with the extension of the circumference, it seemed as if a decided advantage had been obtained. The abundance of the concrete life, which the historical developments contained in their comprehension, might now pour itself out in the entire universe, and animate it. Life thus appeared greater and freer. Who would complain of the time which brought such principles to their expression, if it gave itself up wholly to the new doctrines, and hoped for a complete change for the better as a result of this immanent interpretation of the world?

Only by degrees the limitations and difficulties of

this theory came into sight. Above all, is it certain that here, too, a duality in the world is established, and perhaps more firmly than ever before. For the world which scientific thought constructs is thoroughly distinct from that which is present to sense-perception, and the chasm becomes the greater. the nearer thought approaches its boundaries. What is given is dissected and brought into new connections, but in that way its contents and the relations of single objects are completely changed from their original form, so that science gives back the world in an essentially different condition from that in which it received it. And the further we advance in the progress toward simple forces the further away do we get from what was originally given; and so, in a peculiar manner, does investigation seem to remove the world further from us, as fast as it teaches us a knowledge of it. At any rate, the world of exact science is at least as much estranged from the world of common sense as was formerly the world of artistic intuition from that of religious faith.

But, in regard to the simple phenomena as well, problems arose, the answers to which diverged even to contradiction. In the ordinary idea of the world, the mental and the material elements seem to stand side by side, but such juxtaposition can not be allowed here in ultimate analysis: an inner connection, or a reduction of the one to the other, must therefore be obtained. From one point of view, then, the content of the world is regarded as mental and specifically intellectual; for it is particularly characteristic of modern times to limit the mental by thought. The sum total of what is presented is accordingly supposed to be transformed into the forms of thought and of knowledge: the world presents a complete process evolved by the constant activity of the

mind, in which process everything particular is inserted as a single gradation. Herein is found the highest task of science: what is immediately presented, the crudely material, is taken up and transformed; what is apparently at rest is set in motion; in everything external something mental is recognized; but the limitation remains, that in such an interpretation we do not pass beyond purely formal determinations, and, as is well known in the case of the systems of the Constructive philosophers, we must renounce the apprehension of everything concrete.

On the other side, external nature, scientifically considered, serves as the true world. Here the specifically modern categories find their full realization: the heterogeneous is more and more conceived as the result of simple primary activities; laws are discovered, in accordance with which all events proceed; through the concept of progressive formation, the complex is, as a matter of fact, obtained from the simple. The immanent explanation thus receives a concrete meaning; it opens to scientific treatment an infinite abundance of material, an immense kingdom of forms. But we do not arrive here literally at a concept of the world. Individual objects are considered as acting in juxtaposition, with no conception of their coexistence; harmony is found in the forms of events, without an understanding and a justification of the inner nature of this harmony; so that, finally, the concept of law hovers in the air, new grooves are formed, and the whole advances, yet not according to a necessity of the whole, but from the accidental conjunction of single forces acting aimlessly for themselves. If law and form can not thus be truly understood in their own province, the thought-process involved presents an impassable limit: we have

no concept of that very thing which supports and conditions the whole science—that is, the observing and investigating mind itself. So, though the whole theory may attain, in its own sphere, what is astounding and indubitable, it is all valid only under so many conditions and limitations that it can never furnish an ultimate apprehension of the universe.

It is evident from all this that the two tendencies are reciprocally related, and we must have a broader concept of the world than that offered by either one-sided idea. This problem was so evident that none of the prominent speculative minds could overlook it, and a history of the concept of the world in modern philosophy would mirror its general development as well as the peculiarities of individual writers.

But Leibnitz unquestionably presents the best attempt at a solution of this problem. With him nature and the thought-world are united in the fact that they can be known as different degrees in our comprehension of one single world. After each for itself had been constructed completely and without interference, the two should be united in an ultimately comprehensive philosophical consideration, and this should be done after these elements had been adjusted to each other. But it was a necessary condition of this union of nature and mind that Leibnitz should extend his concept of the world, as regards its principles, so far as to include not only the forces evidently active in the phenomenon, but also the latent yet still active forces. What was presented to the senses appeared thus as the consequence of events extending further and deeper, and these concealed events must be added in thought to bring causal connection into individual phenomena; and the question then arose whether it was not possible, by such a

transformation of the concept of the world, to raise the concepts into a sphere where the antithesis between nature and mind could be overcome. Leibnitz exerted himself to the utmost to accomplish this; but we shall be compelled with Kant to deny that he has succeeded in the essential thing, in spite of all the brilliant discoveries and all the extensions of the realm of knowledge to which this endeavor led him. There was, in fact, a union, but in a kingdom of shadows, Ontology: the concrete determinations remained at the end still undecided. But, in the primary concept of possibility, the physical significance of tension and the logico-metaphysical significance of the (legitimately) thinkable always diverge, in spite of every attempt to unite them; and the endeavor to join together an intellectual and a sensuous world is thus wrecked.

The clear knowledge of the impossibility of solving the problem from the given premises was a determining factor in the formation of the Kantian philosophy. The antithesis is still maintained, but, together with all knowledge, is transferred to the province of the phenomenon. In this way the whole concept of the world is changed, and the modern doctrine of categories given up. Things in themselves (*Dinge an sich*) are separated from phenomena; the endeavor to reduce the heterogeneity of the forms of action to a primary force is relinquished; a multiplicity of powers is left in juxtaposition; the significance of the coexistence of things is decidedly undervalued; in short, an important revolution commences here, upon the closer study of which, however, we can refuse to enter in this connection, since the principles, and with them the problems, of the seventeenth century have, in spite of this system, remained predominant, in their importance and their

completeness, in actual scientific investigation. It may, then, be unhesitatingly asserted that at the present day, as well, we lack wholly a concrete philosophical concept of the world, to which the different realms and kinds of existence are subordinate. Not only mind and matter, but also content and form, are divergent concepts. One man thinks primarily of the one, another of the other; and only the word conceals in some measure the fact that we think something utterly different, provided that we in general think anything at all under the term.

With this problem of the determination of the content of the world, other problems are connected; and they likewise present difficulties to an immanent explanation. The single phenomenon is to be conceived entirely through that which is comprehensive, or, rather, what is valid, as derived, is to be conceived through what is simple; only the question arises whether every special formation can be so understood, and whether we are not compelled to recognize a certain individuality in specific groups and in single objects.

The Naturalistic school, especially, is in danger here of presenting to us as cosmic, without further question, that which is empirically the most distinct, and is from the outset given as purely phenomenal, or as unique, without regard to any combinations in which it may occur, and is thus in danger of considering every specific formation as a casual and independent result. Yet it may be that what thus appears only in unique formations is of great importance in its bearing upon our ultimate theory of the world. What is apparently specific may compel us to change our most general principles. Instead of insisting upon a comprehensive concept of the world as a substitute for a concept confined to strictly human limitations, men, in ordinary discussion, are

very easily led to accept simply the positive contrary of any proposition which they may oppose. Thus, when they deny that the human sphere gives us the truly cosmic, they assert at once that the inorganic sphere must serve as the cosmic. Modern investigation incurs great danger from its readiness to consider a thing as already proved simply because its positive contrary has been shown to be inadequate.

The concept of the world and the immanent explanation find no less difficulty in the relation of events in time to primary forces acting outside of time-relations. Understood as a process of development, events seem to be bound up in time. The later supposes and assumes the earlier, but in that way it becomes dependent; so that the problem arises, how determinate formations can be reconciled with the immediateness and freedom from time-relations of the primary forces. There is also a weakness in the explanation as given, in the fact that the present can be understood only by the past, and yet an immediate verification is insisted upon. This dilemma appears most evidently in the Hegelian system. As a matter of principle, development must be understood as something constantly turning back to itself, and so outside of time-relations; but, then, the different elements in the system are essentially distinct, and either time and all that happens in it must be considered a pure illusion (which view at once starts a number of new questions), or else the speculative primary principle must be modified, if not given up.

The Naturalistic school has to encounter the same difficulty. It must regard any special event as something partaking of the general nature of the whole, and above time-relations, and so must assume it to be something simply existent rather than a manifestation of

force, or else it must regard that which comes later in a series as something wholly new, and devoid of all sufficient causal connection. The dilemma thus continually faces us, either to limit ourselves to the elements which appear under time-relations, or to give up the doctrine of the pure immediateness of knowledge; and the old problem of the relation between history and eternity remains unsolved.

From all this we can easily see what judgment we are to pass upon the demand for an immanent explanation of the world, which is made to-day with increased emphasis. There is a truth in this explanation which, in its general application, we must admit as being above all contest and doubt. Only what manifests itself as acting can be recognized as existing; and it is the problem of an explanation to reduce to such actively manifested forces everything which is an object of experience. The general difference between our day and other periods, especially the middle ages, lies in the fact that we hold this truth firmly in consciousness, and therefore recognize nothing as existing which can not be obtained, in a strictly causal connection, from that starting-point. But the question immediately arises, how far thought is compelled to go out beyond what is immediately presented in order to apprehend what is ultimately and independently active, and so to arrive at an actual explanation, instead of a mere periphrasis; and, in view of this question, every answer is a wholly definite thesis, which must be carefully established, and can in no way be regarded as covered by that general truth from which it starts.

If the immanent explanation of the world asserts here as much as this, that we are to stop with what is immediately given in external nature, then, as we have

seen, the entire work of modern science, and, in general, law and form, and even all thought-activity, remain, in their own spheres, devoid of suitable concepts. And, even if the practical physicist easily corrects here in his concrete work the original mistake, on the other hand, the theorizer in physics is inclined to increase the error, and to call that an immanent explanation of the world which is the precise opposite of what the expression asserts. He speaks of immanence, where the question is one of purely external relations; of the world, where the idea of a universe is given up before the overwhelming power of isolated phenomena; of explanation, where only a juxtaposition of external events is given.

But, if the demand for an immanent explanation of the world expresses the principle that what is present in nature and in mind is to be taken as the measure of truth, immediately, as it presents itself, one leaves out of consideration the activity of the mind, and particularly the transformation of the idea of the world which in our day proceeds from it. If, finally, thought-activity is recognized, but is limited to a purely formal transformation of what is given to the senses, the question arises whether such a transformation does not necessarily lead still further, in regard to the material itself as well as its forms, and give to the world of thought a richer content than it does to the world of phenomena.

Such problems and difficulties, which grow upon us all the more as we advance, need not, as a matter of course, weaken the general postulate of an immanent explanation, but they do seem to justify the question whether the definite method and the whole style of treatment laid down by modern science accomplish their aim, whether, in order to advance perhaps a single step, broader starting-points must not be sought out,

whether other concrete definitions of that which acts must not be adopted, whether other methods corresponding to these must not be constructed. But we treat such questions unjustly, if we touch upon them only hurriedly.

MONISM—DUALISM.

"I assert that to present an actual antithesis in all its strictness is as advantageous to science as to present an identity."—
SÖHRELLING.

ONE of the leading difficulties in the way of a universal concept of the world, and an immanent explanation of it, consists in the distinction between material and mental being. Hence all attempts to diminish or to remove this distinction must be of serious consequence in their bearing upon the entire work of science, and for this reason the Monism of modern natural science can be sure of commanding universal attention.

So far as the expression goes, Dualism is older than Monism. It is first used by Thomas Hyde, in his work "*De Religione Veterum Persarum*," to denote a religious system, in which an evil principle is placed by the side of the good principle, and in this sense the word was accommodated to a wider application by Bayle (see the article "*Zoroaster*") and by Leibnitz (see "*Théodicée*," ii. 144, 199).* Wolff first forms the antithesis of Monism and Dualism, but applies it to metaphysics, and not to religious philosophy. He calls Monists those thinkers who assume only one principle, whether of a mental or material nature, so that "*Idealists*" as well

* See, for example, Brucker, 2d ed., i. 176: "*Ex ratione systematis quod vocari ita solet dualistici.*"

as "Materialists" * are comprehended under the term; while Dualists are those who consider matter and mind as mutually independent substances. Among the latter Wolff wished to be reckoned himself. The word Dualist obtained a tolerably wide usage in this signification (see Kant, "*Kritik d. r. Vernunft*," 1st ed. [in Hartenstein's ed., iii. 599]; Fichte, ii. 88: for another meaning, see Kant, vi. 360). Monism, on the contrary, led a miserable existence † in philosophical dictionaries, until, as a denotation of the Hegelian philosophy, it obtained a very wide use (see Göschel's "*Monism of Thought*," 1832). It had again in some measure fallen out of use, when it was taken up by modern natural philosophy, and made the watchword of a doctrine which considers mind and matter neither as separated nor as derived from each other, but as standing in an essential and inseparable connection. Matter receives, as an original determination, a mental characteristic, which in the progress of formation develops into the activity of full consciousness. Mind thus becomes a part of the general world-process, and is controlled by its physico-mechanical laws. Accordingly, as the term Monism has thus passed over into what is nearly the contradictory of its original signification, our estimate of its value is also changed. While the followers of Wolff believed that they could not guard themselves with too great care against Monism, at the present day that doctrine of natural philosophy is almost never contested, except to substitute for it another form of Monism. Such a transformation can well be inter-

* Idealism will be treated later in detail. "Materialist" I find first used by Boyle (as in his work, which appeared in 1674, "*The Excellence and Grounds of the Mechanical Philosophy*").

† In Fichte (ii. 88) we find Unitism used as the correlate of Dualism.

puted as a sign that in the present problem different points of view are possible, and different elements intersect ; and this, on closer examination, we find to be the fact.

On a superficial consideration, and still more after a scientific investigation, mind is found to be so closely connected with matter that every forcible separation of them appears violent ; to this we add that metaphysics demands unity of the ultimate principle, and, at the end, the æsthetic intuition refuses to allow the separation of the sensuous and the mental.

On the other hand, there appears at the outset a reason of equal weight for the impossibility of success in this attempt, if the self-consciousness of the mind, the consciousness of a unique content of life, leads to the claim of a peculiar and a superior position in the world ; such a demand is also, in fact, supported by the analysis of the specific contents of both spheres of existence, and this analysis presents such pervasive differences between the two spheres that a simple union or identification of them seems to be impossible. So each kind of existence stands opposed to the other—each strong enough to assert itself, yet too weak to carry through the overthrow of the other.

Among the Greeks the principles of Monism were predominant, but with them the doctrine assumed very different forms. At the outset, mind was associated with matter only as one of its characteristics, until Anaxagoras introduced that distinction which constituted the preliminary condition of the doctrine of the Socratic school. After Plato had endeavored to give to mind the leading place in the universe, a speculative Monism was constructed in the Aristotelian philosophy, which sought to embrace both elements, and which, in

spite of many vacillations in its execution, may be regarded as the culmination of Greek thought. The later schools, too, maintained a Monism, only there was an unmistakable falling off in the fact that the principle became more abstract with the Stoics, more crude with the Epicureans. The genuine tendency of thought was toward a Dualism, which, partly from its association with Plato, partly from its submission to Oriental influences, assimilated the antithesis of mind and matter with that of good and evil, while it expressed this antithesis most distinctly.*

Nevertheless, the development of Grecian thought rose yet again to a monistic conception of the world, and created in the doctrine of Plotinus a system in which matter was inserted in the spiritual-intellectual life simply as a phenomenal form and degree. But an age of decadence was not capable of vigorously carrying through this principle of a spiritualistic Monism: in the very attempt to overcome the antithesis of mind and matter, the world was divided into an ideal element, and one known phenomenally through the senses, and matter pressed in again as a positive force, the force of evil. Greek philosophy always arrived at a goal directly opposite to that from which it started. Mind, at first buried out of sight in the events of nature, worked its way by degrees to independence and freedom, and clearly maintained itself there; yet, in the struggle to defend this position, it was ever more and more compelled to degrade, and even to give up, the phenomenal world, until it at last transformed it into a simple similitude of true existence. As the Idealism of the Greek character showed itself, if anywhere, in the sacrifice of

* Plutarch, "Isis and Osiris," 45 (ed. of Parthey): *δεῖ γένεσιν ἰδὲν καὶ ἀρχὴν ὥσπερ ἀγαθοῦ καὶ κακοῦ τὴν φύσιν ἔχειν.*

the phenomenal world rather than in that of the reality of the thought-process, so its speculative power was perhaps best manifested in the fact that, in spite of the immense pressure which at that time weighed heavily upon thought, it was unwilling to end with a disunited world, and sought in itself the ultimate unity.

We can attribute to Christianity an absolute Monism, so far as it makes the mind, as a free personality, the source of all existence. Still, here, as in many other places, the general theory is determined more by the phenomenon with which we come in immediate contact than by its ultimate cause. But in that phenomenon the distance between matter and mind appeared so great that man was usually designated as something compound (*συντεθέν*, *compositum*). The estimate of the ethico-religious content of the thought-life not only excluded its degradation into a simple event of nature, but also forbade a too close connection of mind and matter; and this gave rise to many schools. Hobbes could well appeal to the materialism of Tertullian, while, for Augustine* and the Mystics, mind alone formed the ultimate existence.

But the discussion of this problem reached its culmination in modern times. Powerful impulses to each tendency came in anew, and increased the vehemence as well as the fruitfulness of the contest. Monism had usually a little the start. On its side was especially active the endeavor to attain an immanent conception of the world, by which endeavor the demands for unity and connection in the universe were so increased that

* See Augustine, i. 254 D: "Intellectus in quo universa sunt vel ipse potius universa"; vi. 96 C: "Colligitur non esse causas efficientes omnium quæ fiunt, nisi voluntarias, illius naturæ scilicet quæ spiritus vitæ est."

two different primary forces were not allowed to remain in juxtaposition. Added to this were the tendencies to Monism arising from the increasing knowledge of the dependence of the thought-process on bodily functions; from the theory of the relationship of the human to the lower forms of life, which seem to be dependent upon matter; and from the principle of development, in view of which nothing can assert for itself an isolated existence.

From the first it was believed that the problem could be solved by a simple union of the two elements, and already in the sixteenth century a principle was advocated in scientific circles which shared in many of the features of the Monism of to-day. An inner life was attributed to everything corporeal, and in all occurrences in nature an analogy to the activity of the soul was assumed. Paracelsus, for example, found in all things a soul, or rather something "conformable to the soul";* and the chief apostle of this new philosophy of nature, Giordano Bruno, announced with enthusiasm that even the smallest particle contained in itself the properties of a soul, and that matter and mind could be traced back to a common source.†

The maintenance of this position was, nevertheless, opposed by weighty scientific reasons, especially in physics, but also in philosophy. It was an indispensable pre-supposition of all exact cosmology, that matter should

* "Phil. ad. Ath.," ii. 6: "To better understand what an element is—an element is nothing else than a soul. Not so much that its essence is as a soul, but is conformable to a soul. For there is a difference between the soul of the element and the eternal soul. The soul of the element is the life of everything created."

† "Della Causa," ii.: "Spirto si trova in tutte le cose, e non è minimo corpusculo, che non convegna cotal porzione in sè, che non inanimi"; iii. toward the end: "In somma l'una e l'altra si riduca ad uno essere et una radice."

be freed from those inner characteristics which had been read into it by the Scholastic Aristotelianism. For the very reason that all action was reduced to inner forces, and the peculiarities of the thought-process were continually carried over into nature, there could be no scientific knowledge, in the modern sense of the term. The primary principles of this knowledge are valid only so far as everything subjective is given up, and nature is regarded as something soul-less. But much painful labor has been necessary to carry that principle through; men like Nicolaus Taurellus, Kepler, Galileo, and others, have been compelled to lay out their whole strength upon it, and have advanced to their goal only step by step. The human mind was compelled to separate nature from itself and to renounce all immediate union with it, a renunciation which demanded a degree of strength and a sacrifice which command our highest respect.

Moreover, just as the analytical process in physics had come to its first conclusion with Galileo, it passed over into philosophy through Descartes. With the latter, matter and mind were from the first distinguished in principle; the activity of consciousness and extension, although closely and legitimately united in action, could not be reduced to one essence; so that we can assert, not a oneness of nature (*unitas naturæ*), but only a oneness of composition (*unitas compositionis*). Descartes was compelled to judge thus if he wished to be consistent with the first principles of his philosophy; for, if a substance is inferred only from its action, or rather is added to that in thought, an existence with two entirely different forms of action can not be allowed.

Yet, in fact, on the other hand, in the progress toward a single immanent conception of the world, two forces essentially unconnected could not be left un-

molested, so that the two most powerful tendencies in modern philosophy became thus contradictory. In either case the naïve Monism of the sixteenth century was destroyed, and the problem became so extensive that an advance in its solution could be hoped for only by means of a speculative transformation of the phenomena.

Of the solutions offered, the most important for us are those of Spinoza and Leibnitz. The former, leaving the Cartesian concepts of matter and mind almost unchanged, attempted to remove the difficulties by the way in which he defined their relations to each other and to substance. His principle of essentially uniting matter and mind in the concept of the world is, in its general content, so necessary and so convincing, that his mistake in the development of it is often overlooked. It is enough for us to remember that his comprehension of the principle and his complete development do not agree. According to his principle, Spinoza would have been compelled to refer mind to the absolute substance as a conscious subject; in which case, of course, his philosophy would have become mysticism, and the relation of his concept of substance to that held in the middle ages would have been clearly evident. If, on the other hand, the material world, in its actual existence, underlies that absolute substance, a concrete content is thus, to be sure, obtained, and a position in the realm of modern science is assured to the mind; but mind, so far as its specific essence is concerned, is sacrificed,* and Spinoza's entire philoso-

* It is of especial significance to this that the law of inertia is presented as a primary law of all being, even of that which is mental. See "Tract. Theol. Pol.," xvi. 4: "Lex summa naturæ est, ut unaquæquæ res in suo statu, quantum in se est, conetur perseverare, idque nulla aliterius, sed tantum sui habita ratione" ("Eth.," iii., Prop. 6).

phy becomes a naturalism, and even a materialism, on the basis of a mysticism. This apparent reconciliation of the incongruous practically contributed not a little to the extreme results at which he arrived.

The attempt of Leibnitz is superior to that of Spinoza, because with him the meaning of the concept was not simply taken from another philosopher, but was more exactly determined by means of an independent analysis. In matter the characteristic of force took precedence of that of extension, but the concept of mind was so enlarged that it embraced also unconscious activity. And then the attempt was made to understand matter as a legitimately precedent appearance of mental being, a *phænomenon bene fundatum*, and to conceive the whole external world as a mirage of the mental Cosmos presenting itself to the finite, and therefore confused, percipient mind. In this way all physical determinations were subordinated to the determinations of mind, and even the primary laws of motion were supposed to be derived from the idea of the most perfect world.* The impossibility of representing mind as the origin of sensuous phenomena (since it will never be possible to a theory to bring into a simple sequence what is given to knowledge under essentially different conditions †) testifies less against this gigantic attempt than does the fact that, in such an endeavor to establish mind as the unique world-

* He says (682 b): "Physicam necessitatem sic explicui, ut sit consequens moralis."

† Leibnitz himself has clearly shown the inconsistency of such a demand (358 b): "Vouloir que ces phantômes confus demeurent et que cependant-on y démêle les ingrédients par la phantasie même, c'est se contredire, c'est vouloir avoir le plaisir d'être trompé par une agréable perspective et vouloir qu'en même tems l'œil voie la tromperie, ce qui serait la gêner."

power, all that is specific in the contents of mind is lost. The monads are ultimately, according to the philosopher's own expression, only "metaphysical points," and no longer spiritual substance; the idea, with its comprehension of plurality in unity, is no longer a psychological, but an ontological concept.* If, then, Spinoza subordinated to nature, and thus destroyed, the concrete content of mind, Leibnitz sacrificed mind and nature to ontologico-mathematical definitions; and, if Spinoza's concepts directly contradicted the facts of mind, those of Leibnitz were exact only for an abstract comprehension, the way back from which to concrete properties could not be found. The fact that Spinoza's doctrine, with all its one-sidedness, had a definitely expressed meaning, was in great part the reason of its accomplishing far more, and appearing to defend more vigorously the principles of Monism. For anything which can be expressed in a concrete form is often practically influential and successful, whatever may be its errors.

When the school of Leibnitz, presenting tamely the fluent and vivid principles of their master, made of his Monism a lifeless Dualism, it was a natural result that, as opposed to them, freer and more penetrative minds greeted Spinozism as a solution of the problem, and that Spinozism thus appeared as a new system, and attained an idealistic interpretation. Scientific and artistic elements combined to produce an instinctive opposition to "the infamous Two in the world" (see Lichtenberg, "Miscellaneous Writings," viii. 151).

* Kant's reproach (iii. 231), that Leibnitz intellectualized phenomena, rests on a very superficial understanding of the subject. It is rather the fact that he ultimately subjected both mind and nature to a third something.

But the synthesis which seemed so necessary was demanded rather than established, and the Systematic philosophy was especially influenced by the failure of the monistic attempts of Spinoza and Leibnitz. The prominence of the specific difference between matter and mind, between sensitivity and understanding, and the knowledge of the impossibility of reducing these to each other were what to a great extent determined the formation of the Kantian philosophy. If the world, as it is phenomenally given, is composed of two factors, as what is reached in ultimate analysis, then there is no finally valid decision concerning the real relation of those factors. Yet, since for us this question is a purely transcendent one, the difference between them remained, and the surprising power with which the distinction was developed in Kant's system necessitated the overthrow of all previous forms of both naïve and speculative Monism as a matter of science, and brought the question into a third stadium.

But it is a fundamental principle of our nature that analysis always calls out new attempts at synthesis; and the German philosophers now undertook most boldly a synthesis, in which they were agreed in deriving the material universe from a mental one, as from what is the ultimate existence and the source of the phenomenal world, while in other respects they were very diverse in their opinions, and allied themselves with various points in the historical discussion. Whatever judgments we may form of the results of these endeavors, as a matter of fact they have played their part in the crisis of philosophy, and have become paralyzed by the influence of common sense. Such a state of affairs was to the advantage of Materialism, which, powerless against every scientific philosophy, always

steps forward instantly in a time of speculative exhaustion, justifies itself by an abundance of phenomena, and so easily obtains an extensive influence.

The Monism of to-day may be considered as an advance upon what preceded it. Clearly recognizing the impossibility of producing what pertains to the soul by composition from matter, however abstractly considered, it prefers to recognize a mental characteristic as essential to all being, and explains this more fully by attributing to matter in general the capacity of sensation and consciousness, while yet in this extension of the concept it raises the laws of material being to the rank of universal principles. This modern Monism has not so much undertaken to subject matter and mind to a new analysis, after their leading historical connection and in a critically systematic method, or to explain the general conditions under which being is given to us as material or mental, and, as connected with these conditions, to make a comprehensive use of all the data now presented, as it has been inferred from groups and connections of phenomena which have not been philosophically treated, which for the most part have been previously recognized and used as individual data, and which have now been brought together and combined into a sort of Darwinian view of the world.

Prominent here is the knowledge of the dependence of psychical on physical events. The results of science have put an end to the convenient theory of former times, which considered matter only as the instrument of the mind, so that the latter unrestrainedly produces its activity purely from within.* Science has driven us more

* We can furthermore request those who gladly ascribe this idea to philosophy in general to name a single thinker of importance who has been contented with it.

and more to the principle that matter has an important influence upon the processes which common sense regards as absolutely mental, since it not only, in some cases, refuses its services to thought, but also positively limits that thought, and even compels the mind to follow definite paths (as is demonstrable in cases of insanity). And it is a fact of especial importance here, that we thus establish a general connection between mind and matter, and also that it is shown to be probable that there is a dependence of determinate mental productions upon material functions—a dependence which occurs frequently, although it has been as yet discovered only as manifest under certain specific relations. Accordingly, that which is apparently simple and independent is thus proved to be compound and variously conditioned; what seems to be unique and intrinsic is still further analyzed; and life is judged to be not a presentation of something which as presented is essentially complete, but simply a creative process toward a new formation.

In this way, a change was introduced into the estimate of the human mind, in its general relations and its special form. After its relation to lower gradations was recognized, and certain primary forms were shown to be common to all life, the lofty isolation of mind could be no longer maintained. The facts of heredity, as they were more closely observed, brought the individual into an extensive connection with other phenomena in the series, and in that way rendered it dependent,* so that the "development theory" was

* The presentation of the phenomena of heredity, in a materialistic-monistic theory, extends back to the Stoa. See Cleanthes (Zeller, iii. 1, 2d ed., p. 180): οὐ μόνον ὅμοιοι τοῖς γονεῦσι γινόμεθα κατὰ τὸ σῶμα, ἀλλὰ καὶ κατὰ τὴν ψυχὴν, τοῖς πάθεσι, τοῖς ἡδέσι, ταῖς διαδέσεσιν· σώματος δὲ τὸ ὅμοιον καὶ ἀνόμιον, οὐχὶ δὲ ἀσωμάτου· σῶμα ἄρα ἢ ψυχὴ.

inclined to transfer such analogies to the universe as well, and to conceive of everything of a higher degree, not only as produced in causal connection with the lower, but also as genetically originating from it.

All this conceals an infinite amount of the problematical. Hypotheses and observations are mixed up in an almost inseparable entanglement, and the wish not only hurries far ahead of the results, but also brings them from the first into very questionable connections. Yet, in spite of this, we can not fail to recognize in the principle of development as a whole a great and justifiable advance in scientific investigation.

To the confusion of concepts, by no means the least contribution has been made by those Idealists who, uniting essential and eternal truths with narrow and contingent principles formed in the development of historical discussion, supposed that the foundations of these truths were threatened by the scientific endeavors here described, and tried to contest that tendency in every point, and, so far as they could, to counteract it. Such men often concentrated attention upon the unavoidable deficiencies in such an investigation, and, thus clinging to what was confused, aroused against themselves the whole interest of the theoretical reason. Every advance in the new direction which science achieved was a defeat to such attacks upon the principle, and so the principle itself seemed to receive a sanction which the facts by no means warranted.*

On the other hand, we should recognize without

* That many phenomena which are in dispute can be very differently interpreted in different connections (as often happens to-day) is shown by Origen ("Contra Celsus," iv. 84): ὅσα πλεονα λέγει τῶν ἀλόγων ζῴων ἐγκώμια, τοσοῦτῳ πλεῖον (κὰν μὴ θέλῃ) αὖξει τὸ τοῦ πάντα κοσμήσαντος λόγου ἔργον.

hesitation both the particular investigations and the general tendency of the monistic theory. The old desire to bring matter and mind into a more intimate connection than that in which they present themselves to the ordinary judgment has, for various reasons, increased so much that it must of necessity find expression in philosophy, and lead to new results. But, the moment the question comes up as a philosophical one, the whole treatment of the subject must be changed; for, where the question concerns only the establishment of empirical events, it may be desirable to comprehend the phenomena in the simplest manner possible; but, where we strive after a conception of primary principles, the explanation can advance only in the systematic connections of philosophy. It is one thing to endeavor to show the legitimate connection of material and mental action; it is another thing to derive the primary forces of the one ultimately from the other, or to bring them into an essential relation as concepts. The former is the problem of natural science and of empirical psychology; the latter belongs to systematic philosophy. In the province of the former, the advantage of Monism is unmistakable; in the province of the latter, it is in any case questionable. The ultimate union of both methods of consideration is an undeniable postulate; their confusion is a palpable error. It is not self-evidently justifiable to carry over to what is essential the relations of what is phenomenal without further investigation, because every phenomenon is bound up in the conditions and activities of our nature, and what is given to consciousness must perhaps be transformed before it can be definitively recognized. This especially concerns the concept of matter, for that concept, although within certain limits it appears simple, is, if more closely examined

and tested, clearly seen to be a product of mental activity, evolved from the phenomena of mental life; and thus it involves problems, and even contradictions, which drive us to a transformation of the conception of matter, and so, beyond what is immediately presented to the senses, into the realms of metaphysics.

But the man who wishes to avoid these ultimate questions is compelled to demand of our modern Monism, as a philosophical doctrine, that it shall advance at least one step: it must bring the separated provinces into a closer union in essence, and so approximate to a unifying comprehension of the world. General concepts must thus be found to which the particular concept is subordinate, or an intrinsic union of different characteristics must be constructed if we would obtain for a philosophical conception of the world anything beyond a mere collocation of events. A necessary prerequisite of this would be a new and thorough analysis of the single departments of science, and a reduction of what is heterogeneous to comprehensive forms of action. As the method of synthesis is essentially conditioned by the precedent analysis, so the significance of a Monism is measured, to a great extent, by the Dualism which it undertakes to overcome.

But, among modern Monists, we usually search in vain for a subtle comprehension of the peculiarities of different provinces of knowledge. To many of them, the concepts of mind and of matter seem to be in the same condition of inseparable coexistence as with the Ionian Hylozoists. Others in their doctrine come nearer to Giordano Bruno. Where the concepts are brought out most clearly, one could perhaps appeal to Spinoza. In fact, the theory of Spinoza, freed from Spinoza's speculative first principles, forms the philosophical con-

tent of modern Monism, so that the latter encounters all the doubts and objections to which the former was exposed.* As we have already touched upon this question several times, we would refer here only to the one fact that the inner world, as compared with the external, is so unique, has such contradictory primary forms and laws of action, that it can never be considered as a mere copy, or a parallel, provided that its specific content in general receives proper attention. Throughout the one world we find a juxtaposition and a composition; in the other, a coexistence and an intrinsic union: in the one, in a given system, all change coming from without; in the other, a designed endeavor, which in the course of its development obtains independence and subjectivity: in the one, everything is in quantitative gradations; in the other, even in the lowest forms, there are unmistakable sensations of contrast.† How can we simply unite together what is so different? It is not, then, enough to attach mind incidentally to matter, but the meaning of its sphere must be altered, if Monism is to receive a philosophical character.

Such a demand can not be avoided by supposing that the mental sphere is possibly small, and almost vanishing; for, in all its variations, there always remains something unique, which uniformly pervades all its forms. Such a treatment of the subject is to be judged as we judge that of many Materialists, when they, by an exactly inverse process, take sensation in the most subtle way possible, and at last transpose deli-

* We are not contradicted by the fact that individual investigators have obtained a deeper apprehension of Monism: in the general tendency which we are considering, the development, as explained, is predominant.

† The Pythagoreans called the soul *ἀριθμὸς ἑαυτὸν αἴζων*.

cate sensation into thought: the difference may be diminished so far as the imagination is concerned, but it is unshaken as regards the concept itself. The leap from mind to matter is as great as is that from matter to mind; mind remains for this stage of the discussion, according to Schelling's expression, uniformly an "eternal island."

Nor, in this connection, do we intend to surrender the recognition of the specific meaning of the higher forms of thought. The fact that, in general, mental life can soar to such a subjectivity and fullness of power as is practically the case with mankind—that alone is enough to overthrow the naturalistic empirical form of Monism. However it may have been produced, to however many conditions it may be subjected, however much it may disappear into the universe when we try to consider it—still, if such thought-power has appeared at only one point, and in one element of the universal life, it would be decisive against a theory which makes mind a simple dependence upon the events of nature. The adjustment striven after is obtained in no case in such a way. For, if the laws of mechanical events are, to the exclusion of all others, recognized as the laws of the universe, all is practically yielded which Materialism can demand. For the thing to be done is not to make for mind a place in the world, but to bring it into recognition in the forms of its life and action. If these forms are abandoned, the one member of the antithesis is simply sacrificed to the other.

But, further, if consciousness and sensation (taken in the widest sense) are added to matter, as to something extended and moved, we may well ask whether the possibility of this addition is so simple. Attributes

can not be glued together at pleasure ; for they may be contradictory in the form in which they are presented, or, at least, they may resist an immediate union, so that a transformation by philosophical labor would be necessary.

Yet we are met by the objection that the question is not if the concepts seem to us to be contradictory or harmonious, since experience shows the fact of the union ; and one raises perhaps, with Lichtenberg (i. 54), the query, " Can we infer that what in our opinion can not happen through things which we know must happen through things other than those which we know ? " We answer, By no means ; but they must happen through things in another sense, and with a different determination from that in which they are first presented to us. The concepts of consciousness and extension have no settled meaning outside of thought, but are the products of thought ; and it is only a self-criticism if, in the progress of knowledge, the first form of them is changed—a self-criticism which is employed only for the purpose of arriving at the actual facts. This whole problem, which since the time of Descartes has given abundant occupation to the greatest thinkers, the problem of the relation and the apparent contradiction of effects as produced in extension and as produced in consciousness—has this problem to-day suddenly disappeared, or do we perhaps pass over the rocks because our ship draws less water ?

In our judgment, if the determinations of mind and of matter remain so peacefully in juxtaposition, we accept again the Dualism which was to be removed, only it is transferred from the phenomenon to the concept, and so to the place where it is the least endurable

for philosophic thought.* In either case, we must give up the whole doctrine of the categories held in modern philosophy—which is also the foundation of exact natural science—if we admit such a concept of a being with two radically different forces. In brief, to receive the characteristic of consciousness, the concept of matter must be essentially changed ; but in that case we should find ourselves again referred to metaphysics.

In this connection, moreover, the extent of this monistic theory starts a doubt. By what right is sensation attributed to all matter? Hardly from any reasons furnished by natural science ; while, from a philosophical standpoint, the subject would have to be treated in a wholly different manner. And what remains of the mind in such an application beyond the province of life? If anything at all, it is a certain analogy with sensation, so that we should arrive again at the “conformable to the soul” of Paracelsus. But by what right can we assume such a concept as a fact? and what does such a concept accomplish in scientific investigation? We might not blame the liberality of the scientist who gives a soul to everything material, so long as that exerts no influence upon his explanation of physical phenomena ; but of what use, then, is such an assumption of a soul? But the physicist and the metaphysician alike are compelled to be on their guard against any such influence : the former, because he would find the first principles of his exact science endangered ; the latter, because he is compelled to discuss the question from a different standpoint, in different methods, and with different aims.

In brief, we confess that in this form of Monism we

* We are reminded here of the sentence : τὸ ἐπανόρθωμα σοὶ μεῖζον ἀμάρτημα ἔχει ἢ τὸ ἐπανορθοῖς (Plato, “Protag.,” 340 D).

find too many questions neglected and unanswered, to be able to expect that it will be of much service in advancing our knowledge of the world. It has not touched the question of ultimate principles; it has not established the specific determination of mental existence; and within its own doctrines there appears a vacillation between physics and metaphysics, which is nowhere of advantage. It in no way touches upon the certitude or the significance of those exact investigations which serve as the starting-point of its Monism. The strength and value of the entire tendency are found in its explanation of empirical events, and in its calling attention to the problems which spring from them. Here this tendency undoubtedly has an important and a difficult task to work out. But the way in which its results are realized philosophically, and the way in which it transforms phenomena into ultimate truths, must, as we have seen, challenge contradiction. For, in place of a thorough and comprehensive elaboration, we see what, philosophically considered, is a hasty and superficial treatment. A building is erected without sufficiently testing its foundation; a synthesis is attempted before the analysis is finished; individual phenomena are suddenly bound together before the justification and condition of such a union are shown. By an arbitrary assertion is solved the ancient problem in which so many and so various considerations meet.

But many dangers follow at the heels of such boldness. The result of doubtful hypotheses appears with the claim of being exact science; specific theories serve as actually decisive, where very divergent interpretations are still possible; but, above all, that is confused which it is equally important to philosophy and to natural science to keep distinctly separate—that is, em-

pirical certainty and philosophical interpretation. The wish seems to be a justifiable one, that the step from experience to metaphysics either should not be made at all, or should be wholly made; for, by the confusion of concepts which thus arises, half-executed aims have always done more injury than real errors : *veritas potius emergit ex errore quam ex confusione.*

LAW.

“To know that one knows what he knows, and to know that one does not know what he does not know—lo! that is true wisdom.”—CONFUCIUS.

IN its historical development, the expression “law” passes over from the sphere of human action into that of events in nature, obtains there a new and sharply defined significance, and in this new meaning strives to extend itself in all directions.

We find the expression “law of nature” occurring quite early in Greek philosophy (for example, in Plato, “Timæus,” 83 E: οἱ τῆς φύσεως νόμοι), but it does not seem to have come into universal use. We often meet, to be sure, the phrase ὁ φύσεως νόμος, but it means nothing more than the mere contrary of positive right (ὁ γαππτός νόμος). The expression is first correctly employed in Latin literature. Lucretius speaks of *fœdera naturæ*, *fœdus naturæ*,* and, in the same connection, of *leges naturæ* as well, and the latter phrase quickly became naturalized, and was permanently established, almost without being called in question. Since, moreover, the elements of human society offer an analogy to the events of the natural universe, such

* *Fœdera naturæ*, i. 586, ii. 302, v. 310; *fœdus naturæ*, v. 924, vi. 906; *fœdus* and *leges* together, v. 57 *et seq.* Virgil, also, thus combines *leges* and *fœdera*.

events are apparently brought much nearer to our understanding by the use of this term.

If, in this concept, the perception of the uniformity of events and of the persistence of consequent phenomena is occasioned by something external to the mind, then "law" asserts incomparably more than it does when not thus referred to an external source; for, in this case, every event is taken as dependent and determined, and each one is brought into a comprehensive connection with other events. Things in juxtaposition appear to be intrinsically united, and that which is transient is judged to be the representative of some permanent substance, so that everything is regarded in a measure as a function of the whole. Yet, since this is in no way given by experience, but can arise only from thought, there lies at the basis of the concept of law an original judgment; also, a postulate which is common to all times and to all thinkers. Yet at this point the activity of the reason admits of very different productions, and every independent thinker has his own concept and use of law, so that a rich historical development is displayed to us in the course of the discussion.

As the term law was not, as we have seen, in general use among the Greeks, the meaning of the concept itself is of all the greater significance in their cosmology.* From the fact that they regarded the universe as a whole, and events as a connected process, and, moreover, defined these events as the manifestation of an eternal and essentially immutable Being, it followed that every individual object must be encompassed and ruled by a necessity with fixed principles. As, in the popular belief, Fate was superior to the gods, so, to sci-

* The concept of law appears most prominently in the Stoical system, where its consequences are first fully developed.

entific thought, the process was superior to the fact, nature to free action. Law, accordingly, is to them something immanent in the world, depending immediately upon the nature of things. Yet in all this there can be no question of a legitimate conception of nature in the sense of modern science. Aside from all the hindrances arising from the condition of the special sciences, there were two general reasons which opposed the formation of such a concept: the synthetic apprehension of nature, which did not penetrate to the smallest forces and to the original forms of action;* and the organic doctrine of the Cosmos, which was inclined to attribute to every element a specific significance, and so to exclude a complete uniformity and harmony in particular events. It is not a matter of accident that in the system of Aristotle, where both of these tendencies find their classic expression, a definite concept of a law of nature has so little prominence. In his system there is no discussion of laws which uniformly regulate all events, no thought of mathematical formulation; and the influence of the Platonic Dualism is seen in the fact that the investigator is not rarely contented if his norms are only approximately satisfactory.

In Christianity the concept of law obtained an entirely different position. Since events receive here an ethico-religious meaning, the free creating act takes the place of the process, and, with the idea of the causal necessity of events, that of their conformity to law is

* How unattainable the problem seemed to the Greeks, which modern physics has practically solved in its own province, is shown in Plato, "Timæus," 68 D: *εἰ δέ τις τούτων ἔργῳ σκοπούμενος βάσανον λαμβάνοι, τὸ τῆς ἀνθρωπίνης καὶ θείας φύσεως ἡγνοηκὼς ἂν εἴη διάφορον, ὅτι θεὸς μὲν τὰ πολλὰ εἰς ἓν συγκεραυνῶναι καὶ πάλιν ἐξ ἑνὸς εἰς πολλὰ διαλύειν ἱκανῶς ἐπιστάμενος ἅμα καὶ δυνατός, ἀνθρώπων δὲ οὐδεὶς οὐδέτερά τούτων ἱκανὸς οὔτε ἔστι νῦν οὔτ' εἰσαῖδις ποτ' ἔσται.*

given up. Consistently with this, it has been constantly considered offensive within the pale of Christianity to refer to fixed laws the decisive facts in the fate of the world—creation, the fall, salvation, the final judgment; and wherever this attempt has been made, from the insatiable thirst for causal conception, it has been rejected as a presumptuous undertaking. Luther can not be zealous enough against his “enthusiastic” and “devilish” “*Why*”; and, although he does not explicitly confess it, the passionate vehemence of this zeal shows us sufficiently how hard it was for him to reject the claims of rational knowledge. In fact, the conflict did not arise strictly from this, that the act of free will in general preceded the law; for, if it were referred to the world as a totality, and understood as intrinsically penetrating it, then a causal and intrinsic connection could very easily be maintained; but the power of will was supposed to be something which intruded itself into the world, interfered with its forms, and altered the course of events, and in this way not only was the connection of things destroyed, but also the essential nature and intrinsic property of law were given up. Understood strictly, the laws of nature seem to be the mere custom of the divine action; and, after their originality and intrinsic nature are thus destroyed, we can no longer be surprised at exceptions to them in the service of higher aims. But the admission of such exceptions, as they are allowed in the common notion of miracles, shows the positive and contingent character of the laws of nature in a form so uncouth that all modern science is necessarily compelled to take up the contest at this point.

The science of our own day stands especially firm in the position that thought deals only with a definite-

ly limited world ; wherefore, every encroachment from without is to be repelled. The significance of the forms and connections of events must be greatly increased in importance by the principle that we everywhere apprehend only an action, and that the essence of a thing is exhausted in its action. But most important of all is the doctrine that the phenomenal world forms a result of simple forces, and is to be conceived as such a result, because from that springs the demand to discover the original and pervasive forms of those forces, to establish them most carefully, and then to use them, in the interpretation of varying events. But, since these original forms of action are nothing else than the laws of the phenomenal world, the investigation of them is a prominent problem, in fact, the decisive problem of knowledge. The law is the point to which analysis points, and from which development proceeds, and so is properly the central point of science. Only by law is the phenomenal reduced to an essential world, and only by law are its heterogeneous elements bound together in unity and connection. The demand of modern science that what is heterogeneous be regarded as a system is thus satisfied, since every individual is presented as an expression of laws, and the laws themselves are arranged after a comprehensive unity. Hence we can say that what were ideas for Plato are laws for modern cosmology.

With such a transformation of principles, the relation of law to the particular event is also changed. Laws are not rules according to which individuals are regulated only in the mass or in the whole ; they do not work on or near some matter which is thus conditioned or limited, but they express immediately and absolutely the form of action in every individual as well as in the

whole, so that there can remain not the least residuum unexplained.* We find, then, the antithesis of universal and particular changed into that of original and derived. Thoughtful minds, even before the culmination of modern philosophy, unanimously opposed that idea of the universal which regarded it as something which is obtained by abstraction from the particular, and which finds its verification in its contrast with the particular: they supposed, rather, that something is proved to exist which acts in all things and takes them up wholly into itself. While thus, in the doctrine of method, the antithesis of analysis and synthesis appears in the place of that of induction and deduction, in a rigorous application of principles the concept of law asserts an important demand—the demand for a definite formula; since in that way only is it possible to subject what is heterogeneous to the original forms of action, and to properly conceive of what is given in the phenomenon.

It was a natural result of all this, that philosophers valued this concept most highly, although they strangely neglected the reflective consideration of it. After Descartes had brought out the modern theory as the result of his investigation, and especially after he had demonstrated the safety of the modern way of forming the concept of law by his proof of simple primary forces with established forms of action, the subject was taken up by Spinoza, who, with the greatest energy, defended the principles involved in the significance of the modern concept as opposed to the ancient principles. For Leibnitz, however, can be claimed the merit of having extended the concept the furthest, of having

* This appears in Nicolaus Cusanus in the ever-recurring demand for *præcisio*.

defended it in the province of mind by recognizing it as specifically belonging there, and also of having finally vindicated it as applied to individual forces. Since to him the prominent characteristics of law were its essentiality and originality, the decisive matter was not the determination of its extent, but the individual, as well as the group, so far as it was considered not simply as phenomenal and composite, but as essential and simple, could possess its own unique forms of action. It is, in general, a result of the whole position of law in modern science, that its extension and limitation depend upon the judgment formed of what is ultimately essential in beings and phenomena.

The carrying out of the concept of law marks the progress of modern investigation, in the course of which that general principle, the truth and significance of which became fully evident in the seventeenth century, has only gradually worked its way into the particular departments of science,* and still continually imposes new claims upon us. To realize what has been already found, to discover new applications, to unite what is apparently diverse, to give direction toward an ultimate goal—all this continually furnishes to investigation new and ever-increasing tasks

Yet it would have been a peculiar occurrence if so important and productive a concept did not give rise in turn to new problems, and if it were not exposed to many misunderstandings. The latter were suggested from the first by the expression itself. There is no doubt but that the term "law" is not adapted to the concept as employed in modern science. It may properly denote the exclusion of what is arbitrary from events,

* We need think only of the sphere of organic life, the border-land of physics and psychology, linguistics, etc.

but its originality and essentiality are not brought out, and its necessity is defectively expressed. For law seems to be a principle prepared before and superior to the individual, to which each particular event must be reconciled; while, as a matter of fact, it is only something which is in the individual, and which represents the peculiar nature of that individual. The idea of a necessity coming from outside, that is, of a compulsion, does not enter into the question at all, so that the usual uncouth opposition of law and freedom (in the sense of internal independence) is shown to have originated in a confusion of concepts. But, in the great whole, law is something immanent in the world, manifesting itself in and with it, not over and before it. It stands neither in the relation of the universal to the particular nor as the precedent to what succeeds it in time; but, out of time relations, it acts in all and through all. Accordingly, law is valid only as the form of what actually happens, not as that of what should be. It either acts simply out from the substance or not at all, while every intermediate opinion demonstrates the error of the attempt to isolate from each other the particular and the universal. And this error is increased and confirmed by the term "law," which always hints at the analogy of its relations in the sphere of its practical application.

We notice such misunderstandings in the transitional period. Law seems to be a power acting above the world, independently of things, and is judged to be something existing absolutely; it is, even, almost personified, and made an object of devout reverence. Giordano Bruno wished to found a sort of religion on the laws of nature;* the system of Spinoza is ruled by a

* See, for example, "De Universo et Immenso," 653. The Highest should be sought: "In inviolabili intemerabilique naturæ lege, in bene ad eandem legem instituti animi religione," etc.

similar principle; and even in the present day the laws of nature are often faithfully esteemed as a Deity. Especially is a principle of action often derived from simple events, which principle would be possible only by reading a will-power into those events.

As opposed to all this, we must remember that not only the entire meaning of law, but also the form of conformity to law, externally considered, can be presented only as a matter of fact, and not as something necessary. To be sure, we can not stop with that; but a deeper concept can be attained only as the position of reason in the world is recognized. And yet those very persons are accustomed to attribute the highest degree of reality to the concept of law who are the least able to justify its significance.

Moreover, all knowledge is limited by laws, so far as the power of which they constitute the forms of action must be continually presupposed, so that this whole explanation retains in the final analysis a hypothetical character. The question how far we can demand that the primary conditions of the power of knowledge be included in the explanation may receive different answers, according to the different spheres and objects of the investigation; but this limit can never be forgotten. Fichte (v. 108) has insisted with reason on the difference between an explanation according to the laws of nature and an explanation beyond the laws of nature; but, in spite of all warning, the confusion has ever increased. In the most different realms, as ethics, sociology, æsthetics, etc., the pervasive and essential form is often taken as the equivalent of the ultimate explanation of the thing: what is continually manifested in definite forms is supposed to exhaust itself in those forms. As is usually the case,

popular thought intensifies the one-sidedness of science into a positive error, so that to the popular judgment the act of obtaining a formula seems to solve the ultimate problems, and the question of essential power especially is kept in the background. Although the knowledge of a law may be sufficient to give us control over things in nature, where it can be considered as something given and persistent, yet in the sphere of mind the most difficult problem lies in the exertion of the power itself.

While the concept of law thus introduces many questions, we sometimes forget, on the other side, that the concept itself involves a difficult problem, which investigation can solve only by gradual approaches. For the idea of the legitimacy of all events, that is, of the capacity of all phenomena to be reduced to the original forms of action of primary forces, is one thing; the knowledge of the exact definition of these forms of action is another. For this, both the penetration to something primary and the presentation of a regulative formula are indispensable. The exact conception of all heterogeneity as an expression of universal law naturally attracts us here as the highest aim; yet, if we approach this only in the most gradual way, we can not in the least avoid the demand that we arrive at the simplest elements in the single provinces of science, and in no case can a purely empirical union or sequence of perhaps highly developed phenomena appropriate to itself the concept of law. Since the investigation has to pass through various stages here, it is of special importance that we continually strike a balance between claims and results.

All these difficulties and problems are magnified by the fact that this question also involves a Dualism in the modern idea of the world, since a legitimate con-

ception of the universe is striven after from the standpoint of mind as well as of nature. From the former standpoint the world seems to be produced by the creative activity of mind; everything heterogeneous presents itself as a stage in a mental process; law determines the direction of this process, and so is, to use the not very appropriate phrase, a law of development. Such a principle, which stands in connection with many points in the earlier periods of the discussion, was clearly outlined by Nicolaus Cusanus, but reached its culmination in the system of Hegel, where, in the dialectic method, it obtained a comprehensive formula.

This school has especially determined the interpretation of the intellectual life, and has obtained a general influence so far as it has everywhere furnished an estimate of the value of the concept of law regarded as a constructive principle. In this system, where the reason as a formative and measuring principle took precedence of the world, the concept of law could in its general bearing be strictly justified. But, in the concrete application, there was unquestionably more use made of the concept of law as constructed by and borrowed from natural science. According to the fundamental idea of science, innumerable simple and similar particular powers are given in juxtaposition in the coexistence of things in the world. Their forms of action are uniformly valid in time and space, or, rather, are free from time and space relations, for which reason it is asserted, not simply, as before, that under similar circumstances a like result uniformly follows, but also that this similarity of circumstances pervades the universe. The apparent heterogeneity of phenomena falls in with this view, for it is conceived as a compound, and is resolved into its elements. To render possible the carrying out

of such principles, the ancient organic idea of nature was compelled to give way to a mechanical idea, in which all coexistence was regarded as composition.

Closely connected with this is the fact that the formula of law was here determined as specifically mathematical, which, of course, is possible only under the condition that all the heterogeneity in the events of nature is not only assumed but fully proved to be reducible to purely quantitative distinctions. This view was advocated by Roger Bacon; still Nicolaus Cusanus held that a definite judgment of the mathematical relations of the universe was absolutely unattainable; and only Kepler and Galileo had maintained the laws of nature in a strict sense up to the time when Newton was able to regard such a principle as the final result of the contest concerning this subject in the seventeenth century: *missis formis substantialibus et qualitatibus occultis phænomena naturæ ad leges mathematicas revocare*.

But, with the maintenance of such an aim, it was necessary to change the whole method of investigating nature. Especially was it necessary to change the concepts of what is phenomenally presented to us, in order to be able to regard it as an expression of a single power; and so the mathematical conception of nature is most closely connected with an analytically systematic philosophy.*

But, then, the investigation encountered new and serious problems at every point. What we usually call the exact † character of modern natural science rests espe-

* This is especially evident in Descartes.

† The expression "exact" was often used in the middle ages, and especially in the transitional period. In its modern use, it has come to us from France.

cially on this mathematical determination of knowledge. The individual is here so completely taken up into the law that it can serve purely as an illustration of the application of that law, yet it thus receives a rare value in investigation as a means of establishing the law. The antithesis of particular and universal, so far as it is possible at all, has here become balanced; no universal stands by the side of the particular, and no particular outside of the universal; wherever we may be, we labor in the whole and for the whole, so that nothing is any longer small, and every point can extend itself to the Infinite. Accordingly, in certain respects, this kind of knowledge can be regarded as the culmination of scientific investigation, and of systematic conception in general.

Thus we see the concept of law always becoming more sharply expressed in its historical development, always predicating more definite presuppositions, always making greater demands upon investigation, yet, at the same time, branching out in different directions, and becoming specifically determined in different provinces of science. But, at the present time, all its different forms act together, and so produce varied confusion. The general concept of the legitimacy of events, the specific interpretation of our own day, and the more precise definitions involved in this interpretation are woven together, in the modern use of the term, into an almost inseparable texture.

Already in the seventeenth century, in the province of natural science, the concept of law was extended far beyond the sphere which it had safely won, yet, notwithstanding this, the scientists maintained the claims which are involved in the concept, and the only matter of doubt is their belief that they were so near the ful-

fillment of those claims. But, then, the concept came gradually into a looser use, not at first so much in the particular work of investigation as in the classification and use of its results, and to-day it is customary, especially with many of the followers of Darwin (not with Darwin himself), to apply the term law simply to empirically established connections of phenomena (laws of heredity, adaptation, etc.).

It seems, to be sure, pedantic to fight about words on such a point as this, but the danger involved here is so great as to justify the apparent pedantry.

In view of the extreme significance of the concept of law in modern investigation, every laxity in its use involves weighty consequences; the danger at once arises of confusing the problematical and the certain, the complex and the simple phenomenon and explanation, and so regarding as completed something which is still in the process of conception, and thus disfiguring the entire condition of science. The name "law" seems to cause a most remarkable blindness at this point, and to beat down the best-founded doubts, as if law acted here in that position of authority which it occupies in the sphere of practical life. It has often been noticed that the assumption of false facts restrains the advance of the sciences far more than does the assertion of false theories, but most injurious of all is the influence of a false assertion of laws, since in that case both the reliability of the facts and the extension of the theory are involved.

Further confusion arose from the fact that the specific meaning of the concept "law of nature" was presented as typical of the concept of law in general, and so the task of scientific work in the other provinces was determined in just the same way as in that of the in-

vestigation of nature. Significant of such a tendency is the endeavor to raise mathematics to the position of instrument of each and every kind of knowledge, and even to make logic dependent upon it. We can trace out here a steady progress from Roger Bacon, through Nicolaus Cusanus, Kepler, and Hobbes, to Leibnitz. What was expressed in outline by Bacon* and Nicolaus Cusanus, is more fully developed by Kepler† and Hobbes,‡ and is carried out by Leibnitz, with a clear consciousness of all its conditions and consequences. He endeavored to conceive of all things heterogeneous and apparently contradictory as gradations in a series; and, where an accommodation seemed impossible, he preferred to take refuge in the help of the concept of the infinite§ rather than to allow the essential principle to be overthrown. And, as he, moreover, carries the the idea out into that of a universal primary force, and reduces all difference to a degree of the development of the idea, so it seems possible to transform philosophy into a system of mathematics, like that which was the foundation of his theory of a mathematically characteristic language. This bold undertaking stopped with the Leibnitzian philosophy, but this did not put an end to the influence of its essential principle upon particular sciences.

* "*Specula Mathematica*," i. 2: "*Omnia prædicamenta dependent ex cognitione quantitatis, de qua est mathematica, et ideo virtus tota logicæ dependet ex mathematica.*"

† I. 31: "*Ut oculus ad colores, auris ad sonos, ita mens hominis non ad quævis, sed ad quanta intelligenda condita est.*" For the reduction of thought-activity to mathematical operations see viii. 157 *et seq.* These passages are the expression of a theory on which Kepler's whole philosophical system rests.

‡ See "*Leviathan*," chapter v.

§ The contradictions disappear, as soon as one member is taken as infinite, and especially, as usual with Leibnitz, as infinitely small.

To arrive at laws by the method peculiar to the laws of matter still seems to many to be the highest goal, though it must, first of all, be determined that the establishment of such a goal is permitted by the nature of the realm of knowledge concerned. If it were certain that phenomena can be viewed everywhere as complex, and be completely resolved into their single elements, that what is given can be regarded as a system of persistent forces, that all distinctions are in ultimate analysis quantitative, and if we could hope to be able to establish all this empirically, then it would, indeed, be a problem to strive after the laws peculiar to nature. But where the conditions are not fulfilled, or, at least, are not yet established to our satisfaction, or where they imply still other conditions, the labor involved will not have its corresponding result. Although single provinces adjacent to mind and matter may have been found to admit of such treatment better than was formerly supposed, the attempts to carry it over into that which belongs specifically to the soul do not seem to us to have overcome in any way the doubts concerning the principles involved.

We can admit many doubts on this point, without on that account calling into question in any way the strict legitimacy of all mental events; * the only question is, whether the specific meaning of a law of nature applies, and, also, whether even the general idea of the modern concept of law satisfies the peculiarities here presented. For, although the concept of law is based upon an original and persistent action of the reason, the

* Especially is it improper to infer that we can know here only rules and not laws; for we mean by a rule that which marks a method and a stadium of our apprehension, while in real existence there are for science no rules, but only laws.

definite historical interpretations of the concept can not be relied upon, since they arise from a specific theory of the world, and are valid no further than they admit of confirmation; and so, being still open to question, they can not resist a sufficiently established supplement, or any additions or changes in their meanings, resulting from a broader cosmic theory. We must also maintain here the principle that the whole method of modern science is not something self-evident and exclusively true, but only one among other possible methods.

The outlines of these problems and difficulties, which the concept of law brings with it into the realm of psychology, appear prominently in the application of the concept to the individual; but, in society and history in general, the difficulties are increased by further combinations and complications. It is here, too, necessary that the general principle of legitimate occurrence should be rendered valid, and this involves a not unimportant advance, but the distance from this principle to the discovery of definite laws of social and historical action, in any proper sense of the word "law," is peculiarly great. In the combined action of many forces, groups of phenomena may appear, which admit of a separate and relatively definite establishment. But, as soon as the attention is directed to the living whole and to the ultimate causes, the difficulties increase so as to exclude at the outset all thought of the formulation of laws.

When, in particular, the sphere of social life is subjected to an examination which seeks to discover its laws, the outlook is essentially changed by the assertion of this purpose, and both the problem and the object of the investigation have everywhere an increased impor-

tance; yet the perception that, even in what at first appears contingent and arbitrary, an astonishing uniformity is to be discovered, that apparently independent occurrences are permanently connected, and that, throughout, constancy increases with the extension of the sphere of observation—this perception seems to have almost intoxicated many an investigator. Purely empirical data are announced as necessary truths, extremely complex events as simple primary forms, the average as something belonging in essence to each individual. The concept of law lies everywhere ready to be applied; and not rarely, in an uncircumspect prosecution of single series of considerations, definite formulæ are asserted with a boldness which can hardly be explained except by the proverb *in rebus dubiis plurima est audacia*. There is less occasion to examine more closely the various errors into which such attempts, and particularly the so-called law of averages, have led, because the matter, in its scientific aspects, has been presented with perfect justice by prominent scientists;* but, unaffected by that, the errors continue in popular thought, and carry with them serious dangers.

In the other realms of mental science, the use of the comparative method, especially, gives occasion to many doubts. Since the beginning of the modern era, that method has been of the greatest service to the knowledge of law, from the fact that by stripping off what is contingent and bringing into prominence what is persistent, it has contributed, as nothing else could, to the discovery of primary forms. Especially where the application of a law of nature is established do we

* See, for example, Rümelin, "Concerning the Concept of a Social Law"; and Lexis, "On the Theory of Groups of Phenomena."

see the method of comparison at once employed, so that it would be an interesting task to follow out its gradual extension. Yet the question arises, whether that which it can furnish has perhaps anything more than a coördinate significance in the realm of pure mind, or can be justified in its claims, except by the fulfillment of certain conditions. For it is a matter of no little difficulty here to mark out the field of what in general can be compared, as distinct from what is only apparently comparable. To be sure, many a man boldly begins to compare without having clearly understood what should properly be compared ; but the fact is, that every particular formation stands in connection with a coexistence of events, from which it must be freed, before its value can be estimated, and before it can be used in an actual explanation. In the way in which the individual is presented to us, an external harmony can very easily have proceeded from wholly different elements ; and, conversely, apparent divergence can have an internal and essential connection. The mere prominence of a common element is not enough, in this case, to maintain simple primary forms ; rather is an exhaustive analysis essential, which demands a constantly attendant systematic thought-process. Only as this is done can the production of new material really advance our knowledge ; only then can we avoid the reproach of directing the attention to the abundance of what is external, for the purpose of avoiding the descent into the depths.

But in this respect, as in the others, the lax use of the concept of law is less the fault of the investigations in special sciences than of the superficial composition and employment of the results of such investigations, for in the former the pervading error is quickly discov-

ered, and the problem is presented in its purity ; in the latter the confusion takes firm root ; that which is the highest aim is suddenly removed from us : and thus it happens that we often deal the more boldly with the concept of law the further away we are from real things. .

DEVELOPMENT.

*Δεῖ δὲ μὴ λεληθέναι πότερον προσήκει λέγειν, πῶς ἕκαστον γίνεσθαι
πέφυκε μᾶλλον ἢ πῶς ἔστιν.*—ARISTOTLE.

THE consideration of the concept of development is involved in almost insuperable difficulties. It seems of course undeniable that mankind can be conceived of as sharing in a historical development; we gladly and easily believe in a continual progress; and then our glance turns to the universe, and it does not seem overbold to exhibit here, too, an advance. But how many problems does such a principle involve if it is to be precisely determined, scientifically carried out, and philosophically justified! The most different kinds of influences act upon the elements which determine the methods of treatment: rational postulates and special facts of knowledge, permanent tendencies and transitory moods, the whole influence of interests arising from each one's special work—all these coöperate to produce that which ultimately appears as judgment and conviction. But, since it would carry us far beyond the limits set to our investigation to even touch upon all this, we must content ourselves with bringing out some few points which are specially worthy of consideration because of their relations to the science of our day.

First let us, according to our custom, trace out the origin of the terms used. A definite term for develop-

ment was apparently first coined in modern philosophy, and the confidence with which the term was employed from the outset marks the significance of the concept contained in it. *Explicatio*, in the philosophical sense of a real, not simply of a logical, development, is a favorite phrase with Nicolaus Cusanus: its contrary is *complicatio*, for which Giordano Bruno, the pupil of Nicolaus, usually substitutes *implicatio*. In Nicolaus we find also, as an equivalent phrase, the word *evolutio*, though it is much less often used. It probably appears in his writings for the first time employed in this sense.* Kepler was the first to use *evolvi* for the development of ideas.† Leibnitz makes an antithesis between *evolutio* and *involutio*: in his French writings he generally employs *enveloppement* and *developpement*. After Wolff had established the doctrine of Epigenesis in his "Theoria Generationis," evolution became the specific term for the theory of the inclosed germ in generation.

Auswicklung and *sich auswickeln* first meet us, in philosophic use, in Jacob Böhme:‡ according to Grimm, *entwickeln* occurred first in Stieler.§ Baum-

* I. 89 a: "Linea est puncti evolutio. Quomodo intelligis lineam puncti evolutionem? Evolutionem id est explicationem." Elsewhere *complicatio* is used in connection with *replicatio*; further, *involutus* and *convolutus* are used by Scotus Erigena. In the logical sense the antithesis of *involvere* and *evolvere* is found in the classic Latin writers (see Cicero, Top. 9: "Tum definitio adhibetur quæ quasi involutum evolvit id de quo quæritur").

† V. 229: "Sensiones perceptionesque aliæ naturales—opus habent motu, quo intercedente omnia, quæ quantitatis causa confusæ essent, per tempora succedentia evolvantur, ut singula sola sensibus accedant."

‡ The most significant passages are found in the eighth chapter of the book on Election.

§ Stieler, "Genealogy of the German Language," 2530, adduces, after *Auswickeln* (*involutum evolvere*), *Herauswickeln* (*expedire se*), and then adds, *Entwickeln idem est*.

garten speaks of an *entwickelt*- and *eingewickeltwerden* of ideas: in general, the active signification is at first predominant, and especially do we often find the development (*entwicklung*) of a concept, of a proof, of a dogma, etc., spoken of. The equivalent employment of the term, in our use, I can show first in wider extent in the earlier writings of Kant: he seems, in fact, to employ *auswicklung* more frequently than *entwicklung*; yet he prefers *entwickeln*, and also *sich entwickeln* (see i. 212). Through Herder, who used the word purposely and from preference, and Tetens, who first employed it as the title of a book,* it came into the common speech, and in the nineteenth century it has been extended so far that it is nearly worn out; and, outside of certain definite spheres, it has become almost unfit for use.

Yet there is no doubt but that the expression, taken in a strict sense, does not at all correspond to the concept which the modern era would have it denote. For, in "development," the thought is practically that of something endowed from the beginning with determined properties and powers, so that what comes later unfolds itself as from an organic germ. Hence it was entirely proper that in the times when the sense of the word was still more clearly conceived, an involution (*einwicklung*) was opposed to the evolution (*entwicklung, auswicklung*). But the philosophy of our own day does not wish to understand the specific formation as something already furnished, or the event as a mere expansion; but the formation is supposed to be constructed originally and ultimately in the process itself. The "development" in this sense constitutes the connecting link between the material substance as presented

* His chief work is entitled "Philosophische Versuche über die menschliche Natur und ihre Entwicklung," 1777.

to us and the simple primary forces, and renders it possible to understand the former from the latter.

Such a theory has, of course, only gradually been carried out in full: the earlier expressions and forms of principles are closely connected with the modern ones, and, even where they do not limit them, they still act as disturbing influences.* The idea, which we can not lay aside, always pressed in, as if that which is produced had been present beforehand in some concealed way;† in brief, the pure forms of the principle force their way out only slowly; yet they are undoubtedly the impulsive force in the process, and they determine especially the distinctive feature of our scientific methods.

The genetic method is certainly, in its general meaning, nothing new, for it was used by Greek thinkers of all schools; and, especially by Aristotle, was highly esteemed for the significance of the principles involved.‡ Aristotle's "Politics" and the treatise on

* This is especially true of Leibnitz, who, in the matter of external forms, is clearly related to the past, although a correct presentation of his concept of the principle is enough to cause him to appear in a different light. How little justice there is in the ordinary criticisms upon his doctrine of development is seen in the fact that he was the first to present the possibility of the single origin of the different species of a genus (317 a): "Peut-être que dans quelque tems ou dans quelque lieu de l'univers les espèces des animaux sont ou étaient ou seront plus sujets à changer, qu'elles ne sont présentement parmi nous, et plusieurs animaux qui ont quelque chose du chat, comme le lion, le tigre, et le lynx, pourraient avoir été d'une même race et pourront être maintenant comme de sousdivisions nouvelles de l'ancienne espèce des chats."

† See Goethe, 23, 269: "The concept of production is wholly denied to us: for, when we see anything become, we think that it was already there. In this way the system of evolution becomes conceivable to us."

‡ See "Polit." 1252 a, 24: 'Εἰ δὲ τις ἐξ ἀρχῆς τὰ πράγματα φύμενα βλέπειν, ὥσπερ ἐν τοῖς ἄλλοις, καὶ ἐν τούτοις κάλλιστ' ἂν οὕτω θεωρήσειεν. He demands genetically-causal definitions, "De Anima," 413 a, 13: Οἱ μόνον τὸ ὅτι δεῖ τὸν δριστικὸν λόγον δηλοῦν, ἀλλὰ καὶ τὴν αἰτίαν ἐνυπάρχειν καὶ ἐμφαίνεσθαι, *et seq.*

the production of animals can be regarded as good illustrations of the ancient genetic method. But just here the essential difference between that and the method of modern science becomes clearly apparent. Adhering to the Platonic theory, it was held that existence precedes the becoming; the type is present originally and out of time relations, and, from the beginning, limits the formation; * the whole precedes the parts, and the higher degree, as the normal, explains the lower, which serves as something restrained, which has not yet forced its way through to pure form.

To such a theory the later antiquity, the earlier Christian era, and the middle ages held firmly, so far as they concerned themselves at all with the problem as a part of a speculative system.† There was in fact no lack of divergent opinions: in the middle ages Abelard is especially noteworthy for the assertion of the proposition that everything simple is from its nature earlier than the complex;‡ noteworthy, too, for the consequences which he derived from it, as affecting

* See especially "De Part. Anima." 640 a, 18: ἡ γένεσις ἕνεκα τῆς οὐσίας ἐστίν, ἀλλ' οὐχ ἡ οὐσία ἕνεκα τῆς γενέσεως. B. 1: ἐπεὶ δ' ἐστὶ τοιοῦτον, τὴν γένεσιν ὧδὶ καὶ τοιαύτην συμβαίνειν ἀναγκαῖον.

† Among the Church Fathers, Augustine especially paid critical attention to this: he compares (and was perhaps the first to do so) all the events of the world to the development of a tree. See iii. 148 d. Lactantius, on the other hand, defends the ordinary orthodox theory when he says ("Institut." ii. 2): "Nihil potest esse in hoc mundo quod non sic permaneat ut cœpit." The idea that the higher is the original aim of a development, and so forms the measure for the lower, appears especially prominent in the Platonizing and mystical philosophers. See Eckhart, 104, 32: "Alles kornes nâtûre meinert weizen, alles schatzes nâtûre golt, alliu geberunge meinert mensche." As regards the consequences of this to the doctrine of knowledge, compare Boëthius, "De Cons. Philos.," v. 131.

‡ "Dialogus inter Philos.," etc., chap. 4: "Omne simplicius naturaliter prius est multipliciori."

the historico-philosophical theory of Ethics and Religion.

But only after modern philosophy had placed action before existence did it become possible to recognize, and everywhere to apply, as the chief method, that which starts from the concept of becoming.* This shows the process of reducing phenomena which seem to be formed from simple forces to their elements, and so of making them conceivable. We arrive here at ultimate points which resist any further analysis; yet only those forces can be regarded as thus ultimate which are continually manifested as active, and the forms of action of which can be everywhere apprehended, and shown at every moment. That which is confused and mysterious thus disappears from the world, or is, at least, so far as possible, put into the background; in everything we recognize that which continually surrounds us. If history thus becomes a means of causal knowledge, it profits itself, since it strips off all that is strange and difficult to explain, permits us to find again that which is our own at all stages, and so comes within the reach of a systematic treatment. Since it is everywhere evident that "the old is new, and the new old," it seems as if the antithesis of historical and eternal, so far as it is at all possible, were here overcome.

Wherever such a method was carried over into any special science, it produced, of necessity, a comprehensive change. Things in juxtaposition came into inner

* Next to Spinoza, Tschirnhausen especially insisted on genetic definitions. See "Medic. Mentis," pp. 67, 68: "Omnis sane legitima seu bona definitio includet generationem." So far as the expression is concerned, genetic definitions were first spoken of in the school of Wolff (see Wolff, "Ontolog.," § 263 *et seq.*); in the last half of the last century (as by Herder) genetic seems to have been used for the real explanation of the process of becoming.

connection, and legitimate knowledge took possession of the entire realm of matter; what was phenomenally given appeared as a step in a progressive series of events, and the apparently dead awakened to full life.

Since the different primary tendencies of modern science thus find here their first verification and confirmation, the successful prosecution of the genetic method justly shows the victory of the specifically modern method of investigation. The physics of Descartes forms the first fully conscious and systematic attempt of this kind.* The method has, in general, agreeably to its nature, followed the path from the external to the internal, and from the great to the small. In the explanation of nature, it has known how to find the way from the cosmological and astronomical problems to the secrets of organic life; and in like manner, in the sphere of mind, it was first the more general formations which one sought to conceive from the process of becoming, until at last the individual elements also were included in the same method of consideration.†

But, the more this tendency was developed in the consideration of what is individual, the less prominent were its general presuppositions; so that finally that was regarded as self-evident which, nevertheless, rests

* Clauberg, "Op. Philos.," 755, aptly sums up the method employed by Descartes as follows: "*Hanc methodum Cartesiana physica tenens—considerat omnes res naturales non statim quales sunt in statu perfectionis suæ absoluto (ut vulgo fieri solet ab aliis), sed prius agit de quibusdam earundem principiis valde simplicibus et facilibus, deinde explicat, quomodo paulatim ex illis principiis, suprema causa certis legibus opus dirigente, oriantur et fiant, aut certe oriri aut fieri possint, donec tandem tales evadant, quales esse experimur dum consummatæ et absolutæ sunt.*"

† See Beneke, "Pragm. Psychologie," 41: "Among the forms which we find in the perfected soul there is not a single one which had not become, and become through a long series of developments."

upon a specific theory of the world and of our relation to it. What is phenomenal must admit of simplification and reduction to primary forces; these forces must produce all formations in uniform methods of action; these formations must fall into a single series; and, moreover, all this process must be such that we can fully and completely apprehend it in the evident events of the world.

Yet all this taken together is not so self-evident, after all; but it needs special proof in each department of knowledge. It is by no means enough to point out some few developed forms, and to follow out from them an empirico-historical development; for it is not in the least determined that the beginning and the origin, the first appearance and the primary force, are the same; and just as little is it proved that the legitimate product appears in a pure form in the empirical event. For in the phenomena we have to recognize a coexistence; forces are given in perfectly definite combinations, in which they interpenetrate and intersect, limit and recondition, thus carrying out the results of preceding events, and accordingly forming a whole so intricate that the original production and the first appearance may be different, and the simple and essential elements in an event may be concealed way behind that which is given to us superficially. We may make use of the empirical occurrence as the starting-point of the investigation; but both the scientific precision of the investigation in general and the value of the genetic method would be most seriously shaken, if we should draw inferences from that empirical occurrence with no further tests, and should believe that we have formed concepts of things by the establishment of their sequences. By such an uncritical equalization of the superficial and

the ultimate nature of things, the most important tasks of modern science—penetrative analysis and discovery of law—would be seriously endangered. The mere knowledge and description of “development” should not so take possession of all sense and thought that we forget to ask, What, then, is developed, and how and into what it is developed?

Moreover, we should not overlook the fact that the genetic method, as it includes all the problems involved in the concept of development, can also be interpreted in all the different forms which development has assumed. In the motley variety of forms in our own day one contradiction is particularly prominent. On the one hand, the world is supposed to be produced from the original activity of one primary force, and everything individual to be legitimately determined by some unity; but, on the other hand, many forces acting in juxtaposition are assumed, only from the coexistence of which does any formation gradually acquire a distinct character. In the one case, the prominent thought is of a mental, in the other, of a material existence: in the one case, the process is from unity to multiplicity; in the other, from the simple to the complex: in the one case, we have a production from internal agency;* but in the other, a superposition of what is external:† in the one case, the chief means of carrying out the

* See Herder, “Ideas upon the Philosophy of History,” v., 2; “—so, I think, we speak improperly, if we talk of germs which were only developed, or of an epigenesis, according to which the members increase by additions from external sources. It is a product (genesis), an action of internal forces, etc.”

† This, of course, does not involve the assertion that no original and legitimate dispositions of things can be included in the superposition. In any case, the denial of this would give to the theory a much narrower meaning.

process is the antithesis involved; in the other, the process seems to be completed by a simple ascent.

Since the time of Nicolaus Cusanus, the former theory has been especially cultivated by speculative philosophy, and it culminated in Hegel, who found the production of all being in the development of the concept. The latter first appeared distinctly in Descartes,* and has attained a wide-spread influence, more recently, in a specific form, in the Darwinian theory. This theory has such control over modern thought that, in its popular sense, the doctrine of development is usually limited exclusively to it.

The term itself should be avoided as suggesting a confusion of concepts. For, if it is supposed to express the thought of anything definitely "developed," it is not strictly adapted to designate the modern doctrine of progressive formation, as we have seen. Moreover, if it is to be referred to one specific theory, the speculative appropriation of it would have a far earlier claim. But, in a Darwinian philosophy, there could be no discussion over a formation by internal forces, or a rigidly directed advance according to original tendencies.

It falls entirely without the province of this work

* Thus, he gives it very cautiously as his opinion ("Princ. Philos.," iii. 58), that it is also possible to explain phenomena on the hypothesis of an original chaos: "*Vix aliquid supponi potest, ex quo non idem effectus (quamquam fortasse operosius) per easdem naturæ leges deduci possit, cum enim illarum ope materia formas omnes quarum est capax, successive assumat, si formas istas ordine consideremus, tandem ad illam quæ est hujus mundi, poterimus devenire.*" Again ("De Methode," 24 and 25): "*Ut sine ulla in creationis miraculum injuria credi possit, eo solo res omnes pure materiales cum tempore quales nunc esse videmus effici potuisse.*" Among other things, the significance attributed here to time is characteristic. Leibnitz decidedly opposed this (144), and because of it accused Descartes of Naturalism. See "*Réfutation inédite de Spinoza*," p. 48: "*Spinoza incipit ubi Cartesius desinit; in naturalismo.*"

to discuss this theory in its practical bearings; yet the concepts involved in it, especially so far as they have a universal and philosophical validity, should not be passed over. The force of the doctrine, even for the consideration of pure concepts, lies unquestionably in the fact that it carries out to its legitimate consequences the principle of explaining any formation by the co-existence of forces. Such an attempt gives to natural science this great advantage, that the phenomena called in question can be tested and precisely established; while the assumption of inner powers introduces confusion in this field, and can not come within the reach of the principles of the modern philosophy of nature. So the theory has at the outset a presumption in its favor, since it allows more room than the others to the endeavor to obtain a knowledge of causes, and allies itself more easily with established principles; and the ordinary prejudices against it are to be rejected as resting, for the most part, on a bungling handling of consequences, which is not even scientific.

Yet the theory is, of course, subjected to all the limitations and dangers of the modern concept of development, and in some respects is subjected to them to a peculiarly great extent, on account of its peculiar outcome. The genetic explanation of our day is, as we have seen, of scientific value only so far as it establishes facts of causation. While the mere establishment of sequences and the description of consecutive occurrences may be a necessary precondition of knowledge, yet, if exclusively presented, they can hardly belong to strict science. But this danger is especially prominent where the question concerns something which comes in from without. So much the more must we insist upon the imperative demand that conformity to law shall be

shown in every individual respect as well as in the formation of the whole; that is, that the phenomenal event shall be conceived as the expression of primary forces in original forms of activity. But since, in this sphere, conformity to law is determined primarily as mechanical,* it becomes a more difficult task to maintain the genetic method of explanation when closely united with the mechanical, and in no case to allow the former to drive out the latter. But very often no attention is paid to such a demand, and the collision of the two methods is overlooked.

Especially is a new formation not infrequently adduced as something which appears unexpectedly upon the scene; although it must necessarily have a causal foundation. However much justice there may be in the polemic against those ancient doctrines, according to which a new event was regarded as already previously present in some concealed way, that does not at the same time affect the theory which supposes a new form to be produced originally from the essence of the primary forces. Some primary force is not to be dispensed with, unless we would fall into a theory of absolute becoming, which puts an end to all exact knowledge. The element, not of precedence in time, but of freedom from time relations is necessary to a scientific conception of the world. Without going back to the Aristotelian doctrine that the being precedes the event, we must insist that original forms of action appear as self-manifesting in every particular event, and that, so far, everything actual is to be conceived as a something possible. Thus, point for point, by the side of a genetic investigation, which examines the production of determinate combinations, must there be a mechanical

* For the concept of the Mechanical, see the section on that subject.

explanation which derives this production from the essential action of forces, and considers each event by itself as a whole every time it happens. Both problems may support each other in many ways ; neither can replace the other, or make it superfluous.

But what is thus true, in particular respects, can be extended to the formation as a whole. However little, according to this doctrine, a primary innate tendency to a definite end is assumed, still whatever happens must, according to universal laws, stand in a connected sequence and causal union. As an advocate of this doctrine, one could say that the actual event does not exhaust all the possibilities, and that it can not be inferred simply from the general properties of the primary forces, but that it always refers to the historical process itself. Yet it does not follow from this that whatever happens is not involved in original and essential forms. One is supported by a fundamental principle of modern science, if he struggles against bringing into a specific tendency the entire development from the beginning ; but that involves forgetfulness of the fact that tendencies, and a general tendency, must be legitimately formed from the universal itself.

Moreover, a discussion of phenomena which is not sufficiently strict involves confusion, because it treats very lightly the question of the permanence and maintenance of what has once been obtained. Because of definite reasons, forces are brought into a combination in which they produce new forms. If these are once provided, it seems to many that the problem of the investigation is solved, and it is believed that the inquiry can be dropped. But if, as is assumed, definite formations arise ultimately from merely opportune interaction of forces, how is it conceivable that such formations

maintain themselves outside of these interactions of forces? If nothing original and essential is brought into action by the external forces, the proposition must in the strictest sense be valid, *cessante causa cessat effectus*, and we find, from necessity, only fleeting and transitory forms in the events of nature.* But, since this is not the fact, the impelling forces must either continue to act or else must be replaced by others; for a definite condition can be maintained only by reason of the persistence of forces, and nothing remains as it is at any given time without expenditure of force. Such problems become more difficult when we consider the vicissitudes of individual formations, and they offer immense difficulties to the whole mechanical theory of explanation; yet many persons simply disregard those difficulties, and cling to the concept of heredity, as if that, in its turn, did not involve all these problems.

This whole failure to appreciate the strictly causal conception, which naturally is the fault, not so much of scientists, properly so called, as of occasional writers, destroys, further, the comprehension and the proper estimation of the world-process itself. If the formative event is not understood as standing in a legitimate connection, then every formation is something contingent, incidental, and joined at random to others as regards primary forces; so that the simple elements, regardless of all combination, are all that have any essential significance in the world, while the entire result of the process from them is superficial and ultimately void of meaning. The further the development advances, the more remote does it become from what is properly real, and the more of the contingent does it involve; so that

* As soon as one employs the concept of the type, the doctrine of occasion is given up, as it finds a limit in the whole science of morphology.

the higher degrees must be conceived as the least original, and thus as the least scientific. The "evolution" would thus not lead to, but diverge from, the actual truth. The reason of all this lies in the fact, that the causal principle has not sufficient power to provide for the event, and to include the lower and the higher in one and the same world-process. The single parts break asunder, and we receive a mere juxtaposition, where science has no right to renounce a systematic combination.

All these doubts increase in force as we pass beyond the original province of investigation, and attempt to gain a philosophic view of the world. But the obligations which are involved in the essentially changed problem have been observed too little in such attempts to justify us in a closer study of them. The decisive problems are scarcely touched upon; the cosmic idea of popular thought is adopted without being tested at all, and the whole philosophy finally results in the attribution of universal validity to the conclusions and methods of natural science without any further justification. Of all this we can notice only the way in which these results are transferred to the specific sphere of mind; because we recognize here a tendency which is characteristic, and, in the present state of things, not without influence.

Above all, there is of course no doubt but that by the suggestion of those investigations in natural science much in the sphere of mind as well has been brought into a new, or a clearer light. The knowledge of the mutability of those formations which are regarded by popular thought as immutable, and the higher estimation of thought-events in general, and of external factors in particular—all this necessitated such a change in

the fundamental idea of mind, that it could no longer be regarded as something which was from the beginning completely determined, and directed toward an aim from which it could not be diverted. The significance of the contest, in which Heraclitus, and later J. Böhme and Hegel were involved, was now, by the more concrete interpretation, brought nearer than ever to popular thought. The principle of the gradual and slow advance of the mind, as defended in connection with this interpretation, found various confirmations in exhaustive special investigations; and from these and other points of view many outlooks were opened up, which extend far out beyond what is even yet clearly visible.

But it is one thing to recognize such principles within the peculiar province of mind, and another thing from this point of view to define mind according to its essential nature. The doctrine that all content comes into a thing from outside is of special significance in such attempts to give to the interpretation of mind the analogy of natural events as the only rule of that interpretation. The mind appears as a *tabula rasa*, to which the external world gives certain characters. Whether that happens suddenly or gradually, everything has ultimately the same origin; and even what seems to be justly considered as essentially peculiar, as the forms of intuition and of thought, is supposed to have arrived at the form in which it is now presented to us, from vanishing beginnings through occasional minute additions.

No small amount of shrewdness has been employed to make such doctrines conceivable, and practically to apply them. It is supposed, for example, that we arrive at our belief in causality through the fact that phenomena appear in uniform connections and sequences:

the combination of these develops a habit; this extends its application beyond the individual cases; and the unconsciously developed activity serves finally as an original law of mind. The attempt is made to form from outside forces a similar concept of the ethical endeavors and emotions. The impulse which seeks essentially simply self-preservation recognizes only what is useful. But in the life of the community enters the necessity of preserving many beings, and, therefore, of placing a limit to the rights of the individual. At this point, either an instinct is adduced, and the question thus only carried back one step, or it is asserted that education, penal laws, etc., give what is necessary in the form of what is good in itself; man becomes accustomed to such a consideration, and finally does, as if from inner impulse, that which is still only suggested to him from outside. This method of explanation, in this and in other cases, results in the theory, that the action of the external upon the internal asserts itself beyond the immediate occasion, and gradually attains such firmness that it seems to be an original primary form of thought-activity.

But the question arises whether such a process of argument, which seems to blind some men, does not have a variety of defects and more than one weak spot; and whether, further, as a matter of fact, the analogy of natural events does not hint at other interpretations than this. Above all, is not an inactive thing such as the mind must be, if considered as a *tabula rasa*, intolerable as a concept? For how can we speak of an existence without attributing to it original powers? * Further, can anything empty and inactive receive any

* Leibnitz called the concept of a *substantia incompleta* a *monstrum in philosophia*. See further, 223 C: "Les puissances véritables ne sont jamais des simples possibilités."

action from without? and is any action in general possible without a counteraction — being thus a result which is determined only on one side? * Moreover, if, in what is subjective, there undeniably takes place an essential change in what comes in from without, this, too, demands a causal explanation, and can not be dispatched by merely disregarding it. As we do not gain a concept of the meaning of a book by supposing it to be copied from some other, and so on, without limit, so in this case we can not entirely disregard the assumption of some original event. Such an element may appear in the phenomenon under various interpretations and conditions; still the decisive fact is that the mind constructs out of things something wholly different from that which they offer to direct apprehension; and in this we can not avoid the recognition of an essential and unique action of its own. Only reasoning in a circle can mistake this necessity.

In causality, for example, it can at the very outset be asked, whether the psychical processes which produce habit do not presuppose a certain original combination? In any case, the very act of transforming the perception of the coincidences of phenomena into a belief in their necessary connection would not be possible, unless the formation of the habit itself were made a problem, and an attempt made to give a causal explanation of it. Why does not man stop with it at the same point that the brute does? The mind could never, even by mistake, transpose habit into causal connection if the process had not an essential foundation in his own nature.

* All such objections can be met by placing one's self in the position of complete materialism; but the question arises whether equally great difficulties do not arise in that case from the other side.

The same thing holds true of judgments of value. The concept of something estimable in itself, in contrast with the useful in general, must be originally formed, in order that the first individual may make use of it; and this must find some foundation in his nature, provided that he is to be persuaded of it: it must always be able to arise a second time, in order to continue to act permanently. All misuse which such ideas admit of still displays the power which they naturally possess for us; and the delusive appearance as well can be understood only on the presupposition of a reality beneath it.

However much may everywhere have come from the outside, it is not enough to solve the problem of the establishment of a mental principle. How is it possible that what is foreign to the mind becomes an independent inner power; that it frees itself from all contingent connections, and strives after a dominion over the whole? It is a matter of indifference to the main question how often or how rarely this happens; if it happens a single time, judgment is pronounced upon the doctrine which makes all that is subjective absolutely dependent upon the external. It is also incidental how much in the process belongs to conscious, and how much to unconscious (better, perhaps, unreflecting), active forces; for the only point is, whether it does or does not happen in the mind. The predilection for the unconscious is often connected with the endeavor to carry the question, as far as possible, out of the field of vision, and the belief seems almost to be predominant in regard to this that what we can no longer observe is no longer present, and hence is no problem of science. To lose sight of a problem, and to solve it, would be, accordingly, nearly synonymous. But to show how many doubts

such an explanation brings with it, owing to the confusion in which it is involved—according to Aristotle's expression an ἐκφυκτὸς γευνᾶν—is not within the province of this treatise.

Yet we seem to overlook something which is essential to the correct judgment of this whole method of explanation, and that is the circumstance that it dissects the psychical structure into small factors, and so obtains a point of approach to that which as a whole it can not reach. If the beginning seems to be easily explicable as something microscopic, an advance is effected by the cumulation of new diminutive parts, and by a gradual synthesis. In a measure the result which we now have is attained ultimately by addition. But against this explanation itself many doubts in turn arise, not so much as regards the fact asserted, that the present condition is reached by a slow ascent from small beginnings, as concerning the way in which this fact is ultimately conceived.

Something small or single is supposed at the beginning; does that essentially change the problem in any way? The fact that phenomena, like those of belief in causal connection and judgments of value, are in general possible at any point and to any extent whatever admits us at once into a new world, and essentially changes the whole comprehension of the question. It may be an unavoidable weakness in our principles that we consider anything small as more easily conceivable than something great; but shall this weakness serve as the foundation of an explanation of the essence of things? Every one who is mindful of the specific nature of the thought-activity of man will hold firmly to the fact that the disjointed phenomena, although at first appearing singly, still have their roots in the whole, and

in the course of the development strive to extend themselves to the whole.

And this course of development—is it really so simple to conceive that the one part is added to the other, and the whole is thus pushed on? Is not a synthetic activity necessary to the combination of the many, and must not the mind itself furnish this activity unless every process is to be simply on it, and not in it? Whoever conceives of thought-activity as at every stage a process combining different elements and as an independent existence, in which there is mutual interpenetration of parts, and in which the one part seeks a connection with the others—whoever has such a conception of it will readily recognize the fact that the whole process is carried out only in that thought-activity; yet he will insist that, if it is to be carried out, the heterogeneous elements in the mind must be reduced to an essential unity. But, if this is maintained, the question still arises, whether the development of mind is to be ultimately conceived just as it superficially presents itself at the outset; whether there are not inner laws to be discovered here, and critical points in the development to be recognized, instead of explaining the whole as only a gradual increase.

Our judgment of the formation and the general result of the thought-activity will depend upon our answers to all these questions. He who maintains in all this process an originality and legitimacy of mental force will by no means judge the fact of a gradual formation to be a proof of a diminished significance of mind as related to the events of the world. Under this interpretation, an event may have, for popular thought, less that is astonishing and novel; while, for science, it increases in value.

But it is specially evident in the method which is sometimes distinguished by the name of "analytical," that in considering these problems many investigations aim only to make the matter as intelligible as possible to the common understanding. The truth is that a treatment which deserves to be called analytical presupposes comprehensive thought-labor; for, to be able to analyze phenomena, one must have assured himself of the leading points of view, of tendencies, even of categories, and this can be accomplished only by systematic activity of thought. But now, not infrequently, the whole is simply separated into its empirically prominent parts; these parts are exhibited in their sequences, and are brought into combinations, and thus one believes that he has comprehended the process. The great problem of philosophers and of the ages has become a sort of piece of artificial work, a matter involving only dexterity and quickness of manipulation. Whether such an analysis into single elements is scientifically possible; whether these pretended elements actually form independent primary forces; and whether the whole can be produced by a simple coexistence—all this is passed over very lightly. What appears first in the phenomenon serves as impulsive force; what is here given as single serves as ultimately simple; determinations which arise from the whole are attributed to the parts; and, since the finished form always absorbs the attention, everything seems to be immensely simple. Thus no question is anywhere raised concerning a causal conception and a strictly scientific treatment; the investigation stops at just the point where the problem begins to become a scientific-philosophical one.

So far as all originality and inner conformity to law are denied to the thought-process, there can consistently

be no more discussion of a systematic and causal conception of the thought-power; for the mind only receives, like a magazine, what comes from without, and is dependent upon an event in which it has no share. The actual unity and the comprehensive connection of parts in the thought-process, the reciprocal agreement of individuals and of ages, and the eternal truths therein involved—all these must be renounced in such a theory; and then the causal significance of the genetic method itself must also be denied.

This, if nothing else, might suggest material for reflection: namely, that with the conformity to law of the inner life that of the forms of knowledge as well is destroyed; and so science itself, with its entire meaning as science, is made worthless. For if it once comes into the mind, it must share the fate of the mind. Of course, its practical tasks would likewise be included in such a fate. What comes into the mind from without can not lay claim to any greater power than that involved in the psychical force; and this power, as entering surreptitiously, must so far as possible be destroyed by an investigation which insists upon finding the truth. This process would, in fact, involve at the outset a contradiction; but it is in any case absurd to maintain acts of reason after the reason itself, so far as it is essential and original, has been taken out of the world.

We do not mean to hold the Darwinian theory and its advocates in any way responsible for such errors in individual attempts at philosophizing. Such pseudo-philosophers only use this theory as a dress for old doctrines which in their germ can be traced back to the Sophists, but which have found their typical expression in the French materialism and sensationalism of the eighteenth century. Whoever wishes to see every-

thing internal keenly and quickly reduced to that which is external, everything original transformed into that which is derived, every whole analyzed into its parts, and everything valuable degraded to mere natural instinct, turns to those men; but he should not forget that, not only has the development in France itself passed beyond such crude ideas, but also that the great achievements of thought in Germany have resulted in a direct contradiction of them. Not simply some peculiar theories of the schools, but the whole consciousness of an age which is powerful in thought and originaive in creations has opposed those doctrines, and the most prominent individuals of that age have expressed that opposition with the utmost emphasis.

The leading illustrations of this are Kant and Goethe. Kant, in opposition to that false analysis, has made valid use of an analysis which truly deserves the name. For him, refusing as he did to recognize anything as simple because a superficial Empiricism offered it as such, preferring rather to test analytically by a systematic investigation everything which is given us, even experience itself—for him, it was evident that an original mental activity must everywhere be assumed to render possible that which, superficially regarded, might serve as the simple and ultimate element.

Goethe also everywhere defended the necessity of an inner and synthetic activity, and in so doing made prominent the obstacles, even to the verbal expressions used, which arose from that atomistic sensational tendency;* and, in his own shrewd and apt style, has

* 50, 244. "We believe that we see here, in the individuals as in the whole, the after-effects of those epochs in which the nation was given up to sensationalism, and was accustomed to make use of materialistic, mechanical, atomistic expressions; for at that time the inherited vocabulary

showed the difficulties and contradictions in which that tendency is entangled. How directly suited to our own day the words seem in which he described the method of those Frenchmen (see correspondence with Schiller, iv. 127): "They do not at all conceive that there is anything in man, unless it has come in to him from the outside. Thus Meunier has recently assured me that the ideal is something combined from different beautiful parts. And when I asked, Whence, then, the concept of the beautiful parts came? and how man came to demand a beautiful whole? and whether the expression 'to combine' were not too weak for the operation of genius, since it makes use of the elements of experience?—for all these questions he had answers in his own language, since he asserted that to genius for a long time *une sorte de création* has been ascribed. And so is all their discourse. They start out resolutely from a concept of the understanding; and, if one carries the question into a higher region, they show that for this new relation they have in every case a word, without troubling themselves to ask whether it contradicts their first assertion or not."

It is a clear proof how little the studies of such men have penetrated the real thought-process, if that which they have not so much opposed, as believed to lie far beneath them, appears again with peremptory claims, and, instead of being universally and at once rejected, is commended by not a few as something new and great. Yet ever again to oppose that which has often been overthrown is of especial necessity to the interests of the principle of development itself. If the stricter

was sufficient for common dialogue; but, as soon as the conversation rose to the subject of mind, the wiser opinions of distinguished men were openly contradicted."

scientific interpretation of it is given up, and if narrow forms everywhere forcibly assume control, then not only is it obstructed in its widespread influence upon the whole realm of scientific investigation, but it is also most seriously shaken in its intrinsic validity. It is thus seen to be the duty of all who stand upon the basis of modern science to appear as opponents of what imperils its fundamental concept.

PRIMARY CONCEPTS OF CAUSATION.

"Nihil veritati prejudicare, sed hoc obtinere quod ipsius rei inducit natura."—"Cod. Justin."

ALTHOUGH our judgments of the causal relation demonstrate the existence of a mental judgment which is original and comprehensive, yet the actual investigations of science have, at different times, led in the direction of a different theory. Moreover, the concepts pertaining to causality have been formulated only by a gradual process.* Although it would be an important and attractive undertaking to follow out carefully both tendencies in their historical development, we can here, of course, refer to this development only so far as this is necessary for the understanding of the

* The oldest of the words expressive of the concept of cause is *ἀρχή* (*principium*, *quelle* in Wolff), for it is found in the first philosophical work of historic culture, the writing of Aximander *περὶ φύσεως*. We find *αἰτία*, after being used by Pindar and others, in a strictly scientific sense first used by Plato. Then Aristotle, as is well known, distinguished the four kinds of causes; while the Stoics first brought out a term for cause and effect (*ἀκολουθία*, *ἐπακολουθήσις*), and coined the phrase *αἰτιώδης*, which the Latins, and especially Augustine, in this specific sense, translated as *causalis*. *Causalitas* is first found in the translations of Arabian philosophers (as Avicenna); the Scholastics probably took it from them. *Grund* and *ursache*, which are used indifferently by Eckhart, were first distinguished by Wolff ("German Metaphysics," i. § 29, ii. § 13), in that *grund* should express the *ratio*, *ursache* the *causa*.

present condition of things. We therefore content ourselves with following to some extent the history of the concepts of the Mechanic and the Organic, and also of Teleology.

MECHANIC—ORGANIC.

The expression *μηχανικός* (shrewd, inventive, artful), which is found, for example, in Xenophon, appears as an established technical term in Aristotle. Mechanics is a limited science, the sphere of which is more closely examined in the work which is so entitled.* The word was taken up by the later Latin writers, and was retained throughout the middle ages; in the German language it was first used by Paracelsus.

Bacon was the first to undertake the extension of its significance on the philosophical side, in that he called mechanical the motion which up to that time had been distinguished as violent (*motus violentus*). But Descartes made ready use of the analogy of mechanics as characterizing his conception of nature; yet he employed the expression mechanic in a wider sense only in isolated passages.† The term came into general use through Boyle, who had a peculiar predilection for it, and gladly placed it at the head of his works.

The word organic appears first in Aristotle, and, as employed by him, signifies nothing more than instrumental. It suggests particularly the idea of the combination of diverse parts in a joint production; and, when he speaks of an organic body, he is so far from denoting thereby an inner vital principle that some quali-

* This book is not genuine, but the use of the term is sufficiently attested by passages in unquestionably authentic works.

† For example, "Epist.," i. 67, where the *mechanicum* and the *corporeum* are opposed to the *incorporeum*.

ying phrase must be added to express this thought.* In this sense of the term there can be no antithesis between mechanic and organic.

This Aristotelian use of the term was maintained, without any essential change, through ancient philosophy and the middle ages.† In Descartes, also, *organicus* and *instrumentalis* are simply synonymous; first in Leibnitz do organic and *organismus* appear used in any peculiar sense. Yet even by Leibnitz they are employed to signify, not the "inner principle" essential to life, but its appropriate organization carried out to infinity. The organic is embraced in the concept of the mechanic. The organism is a natural mechanism, which differs only quantitatively from the artificial one. This definition continued through the eighteenth century. We find organic (natural) and artificial mechanisms coördinated; and, just before the change introduced by Kant, Tetens maintains the Leibnitzian principles when he says ("Philosophical Investigations of Human Nature," ii. 475): "The organization is an infinitely complex mechanism. But this characteristic, however infinite it may be, can still be regarded as a distinction of size and multiplicity."

In Kant's earlier writings, also, the same position is maintained; and it should not be forgotten that, before he, at a later date, introduced a decided change of definition, the peculiar nature of the organic had been made prominent from another point of view. Thus, Jacobi said ("Hume," 172): "To conceive the possibility of

* In his well-known definition of the soul, as *ἐντελέχεια ἡ πρώτη σώματος φυσικοῦ ὀργανικοῦ*, the inner vitality is denoted by the *φυσικόν*.

† In Scholasticism, organic parts (*partes organicæ*) were usually defined as *partes compositæ heterogeneæ*. Suarez says, "De Anima," i. 2, 6: "Dicitur corpus organicum, quod ex partibus dissimilaribus componitur." Organic activities are such as are united to definite organs.

an organic being it will be necessary to conceive first that which constitutes its unity; the whole before the parts." But it was reserved for Kant to bring out the antithesis in all its sharpness, and specifically to separate what had been hitherto gradually distinguished; since he called attention to the reciprocal affiliation of the parts in the organism, and so to the independence and individuality of the whole.* By the Constructive philosophers, and especially by Schelling, the term as thus defined is very frequently employed; and from them the antithesis of organic and mechanic came into popular use,† according to which, with us, the expression organic especially has been so extended in its meaning as to have almost lost all definiteness.

Thus, these expressions which at the beginning stood very near together have, in the course of history, become ever more separated, until at last, by the change of the gradually developed distinction into a specific one, they have come to serve as watchwords of an essential and ancient antithesis in concepts. But of the contest of what we now call mechanic and organic theories of the world ancient philosophy can give us much information; and whatever the later centuries have added to these theories lies only in a more specific comprehension of them, and in their more exact development. But since the significance of the concepts for scientific use is found in this greater precision, it will be enough for our purpose to consider the modern development of the theories.

When Descartes based his conception of living

* V. 388. An organic product of nature is that in which everything is interchangeably design and means.

† Among modern philosophers, Trendelenburg especially has denoted by these expressions a decided antithesis of philosophical conceptions of the world. See "Logical Investigations," 3d ed., ii. 142, *et seq.*

forms and of natural events in general on an analogy from mechanical skill, the fact should in the first place be clearly recognized that all heterogeneity in nature can, in his view, be explained as the combination of similar particles of matter subjected to motion. The difference of living formations from others consisted only in the incomparably greater fineness of the parts and complexity of their combination, so that the human and the natural products come into the same series, and man can understand the action of nature from his own life.*

This new doctrine was especially directed against any such explanation of nature by inner forces and real qualities as was customary in the middle ages among those who followed the example of Aristotle. According to that explanation, nature appeared as an "inner principle of motion"; what was possessed of life determined the entire interpretation of the world; every formation arose from a mysterious and incomprehensible depth. But in the theory of Descartes nature loses this intrinsic unity, and what was before appre-

* To adduce only one of the passages which belong here, see "Princip. Philos.," iv. 203: "Nullum aliud inter ipsa (sc. arte facta) et corpora naturalia discrimen agnosco, nisi quod arte factorum operationes ut plurimum peraguntur instrumentis adeo magnis ut sensu facile percipi possint: hoc enim requiritur, ut ab hominibus fabricari queant. Contra autem naturales effectus fere semper dependent ab aliquibus organis adeo minutis, ut omnem sensum effugiant. Et sane nullæ sunt in mechanica rationes, quæ non etiam ad physicam, ejus par vel species est, pertinent: nec minus naturale est horologio, ex his vel illis rotis composito, ut horas indicet, quam arbori ex hoc vel illo semine ortæ, ut tales fructus producat. Quamobrem ut ii qui in considerandis automatis sunt exercitati, cum alicujus machinæ usum sciunt et nonnullas ejus partes aspiciunt, facile existis, quo modo aliæ quas non vident sint factæ, conjiciunt; ita ex sensilibus effectibus et partibus corporum naturalium, quales sint eorum causæ et particulæ insensibiles, investigare conatus sum."

hended as a unit by the immediate perception, as by a sort of artistic intuition, is now resolved into multiplicity by a more keenly penetrative analysis; yet only by such a deprivation of soul and dissection of parts does a strictly scientific conception become possible; only in this way does man obtain at the same time a point of attack and a lever by which to gain control over the events of nature and to turn them to his own ends.

This mechanical conception of nature is distinguished from that of Democritus, not only in that it attributes only a relative validity to the factors brought under consideration, but also in that it carries out its leading principles with exactness, and extends them so as to include everything individual.* It thus suggests from the beginning that it is, in a sense, superficial, and is advanced rather as a method of explaining the phenomena of nature in the simplest manner than as a theory of the ultimate constitution of the world; and, thus understood, it obtained a direct significance as applied to science, which took possession of it at once and extended it everywhere. The one who was especially active in extending its use was Boyle, who refined the mechanical theory to such an extent that he wished to banish even the word nature, and replace it with "cos-

* The most important illustration of this is found in "Princip. Philos.," iv. § 202 (Democriti philosophandi ratio): "Rejecta est, primo quia illa corpuscula indivisibilia supponebat, quo nomine etiam ego illam rejicio, deinde quia vacuum circa ipsa esse fingeat, quod ego nullum dari posse demonstro; tertio quia gravitatem iisdem tribuebat, quam ego nullam in ullo corporum cum solum spectatur, sed tantum quatenus ab aliorum corporum situ et motu dependet, atque ad illa refertur, intelligo; ac denique quia non ostendebat, quo pacto res singulæ ex solo corpusculorum concursu orirentur, vel si de aliquibus id ostenderet, non omnes ejus rationes inter se cohaerebant, saltem quatenus judicare licet ex iis, quæ de ipsius opinionibus memoriæ proditum est."

mic mechanism." * The development of this meaning of the concept was promoted especially by Newton, in the greater prominence which he gave to the mathematical elements involved. There was also no lack of those who opposed this doctrine; but they were not able to restrain the progress of science.†

At first there was no discussion of any immediate antithesis between the mechanical and the teleological explanation, for the mechanism explained originally only the form, not the cause of the event.‡ Boyle even, carrying this idea out strictly, held that a cause acting from design must be assumed. § First in Spinoza do we find the mechanical placed in direct antithesis to the supernatural, || so that it now not only expresses a form of the event, but also at the same time indicates the presence of the cause within this same event. Since, moreover, he practically carries the mechanical explanation over into the realm of spirit, although not avowed-

* Boyle wrote a not uninteresting treatise, "The Excellence and Grounds of the Mechanical Philosophy." Further, we find in Wolff an *epistola gratulatoria in qua vera philosophiæ mechanicæ notio explicatur*, but it is not particularly valuable.

† Cudworth was especially prominent here with his assumption of a plastic nature. See "The True Intellectual System of the Universe" (1678), i. 3, 19. In Germany, Rüdiger, among others, defended the intrinsic peculiarity of vital force: see "Institutiones Eruditionis seu Philosophia Synthetica," p. 109: "physica vel mechanica est vel vitalis."

‡ Berkeley says, with reason, ii. 457: "The mechanical philosopher inquires properly concerning the rule and modes of operation alone, and not concerning the cause."

§ See especially, "An Inquiry into the Final Causes of Natural Things": "Only gradually has the custom developed of opposing the mechanical to the final causes, to which through antiquity the efficient causes (*causæ efficientes*) corresponded." Passages of this kind are wholly isolated in Leibnitz (see Foucher, ii. 356), while in Kant, of course, from beginning to end, teleology and mechanism are contrasted.

|| See "Ethics," i., append.: "Mechanica—divina vel supernaturalis ars."

ly, we can say that this doctrine obtains first in him an absolute and universal significance.*

At the same time it became more extended in its application to science. We find, in Descartes, the beginning of a mechanical explanation in psychology, when he ascribes to single states a certain independence and fixedness of connection,† and, although Spinoza and Leibnitz diverge widely in their theories and estimates of what pertains to the soul, the one circumstance that they both consider the soul as a mechanism of ideas, and call it an *automaton spirituale*, shows how closely they were related. Yet Spinoza established the primary principle more distinctly and in a more one-sided way, since he resolved the whole life of the soul into single factors, reduced all those factors to intellectual processes, and finally used the law of inertia as the measure of the entire explanation.

The analogy of the mechanical explanation of nature as applied to psychology obtained everywhere all the easier entrance and greater influence, because that explanation was an outgrowth of the general pressure of modern science, and hence found the field everywhere prepared for it. This was especially true of the interpretation of political and social human life. In the discussion of this question, in the transitional period, political systems were in many ways derived from the coexistence of individuals, as original and essentially immutable forces. And from that point this first principle gained increased significance and powerful influence.

* Spinozism is distinguished from the later popular mechanical philosophy only in that Spinoza embraces all events in his one substance, and thus makes place for unity and connection.

† See "De Passionibus," XLV.

In this respect the English are most prominent. Locke disseminates the principles which are taken up and systematized by others. Everywhere the event is to be understood exclusively by the action of single forces within the phenomenon; all subjective connections and confused relations disappear; every unity results from and maintains itself by a multiplicity. The consequences of this doctrine were developed in many directions; and it was unquestionably carried out and concretely applied most successfully in the system of Adam Smith, in which it became properly a fundamental principle of general application.*

This method of explanation increased everywhere the importance of the judgment of causality. What was apparently given as a whole was resolved into individual and familiar forces, and, being conceived as originating in those forces, it was regarded as developed from them. Man thus obtained a far greater power over external relations, since his action could be regulated by his knowledge of these individual elements. Yet, in spite of all these advantages, it could not escape the notice of more critical thinkers that this solution involved many new problems, and that, taken by itself, it was very incomplete.

Leibnitz made the first attempt, under the full recognition of its exclusive validity within a limited sphere, to give to the mechanical theory a wider application. Within the realm of nature mechanism was supposed to exert a power which was uncontested, and which embraced also the forms of life. But the principles of mechanism itself in turn demanded an ex-

* The use of the expression "mechanical" outside of the realm of nature was not customary at that time: in any case, such a use involved a consciousness of a figurative extension.

planation, which can be furnished only by a metaphysical cosmology.* But from this point of view everything complex seemed to presuppose something simple; all relations appeared to involve something independent, so that it became necessary, everywhere in the world, to assume the existence of life, and therefore of an immanent principle. Thus, the organic, as opposed to the mechanic, stands forth, not as another form of a natural event, but as the inner world which lies beyond this; and only so far as it is essentially and indissolubly united with this inner world can the organic lay claim to superiority over the mechanic. Although, in this way, the natural and the artificial structures received an entirely different kind of unity, and the theory approached very near to the antithesis brought out by Kant,† still it does not separate the universe into two distinct parts; since, according to the Leibnitzian doctrine, all being is ensouled, and all matter is organized even to infinity. Still, mechanism presents itself ultimately as organic, so that this distinction treats not so much of separated realms of being as of gradations in the interpretation of nature.

The meaning and the position of the concepts were then further changed by Kant. The concept of mechanical causation was extended to all events which take place in Time and are subject to the law of causality,

* See 161: "Omnia in corporibus fieri mechanicæ, ipsa vero principia mechanismi generalia ex altiore fonte profluere." 155 a, Foucher, ii. 253.

† Most significant is the passage adduced here by Jacobi ("Hume," 115), from a letter to Romond: "L'unité d'une horloge dont vous faites mention est tout autre chez moi que celle d'un animal: celui-ci pouvant être une substance dotée d'une véritable unité, comme ce qu'on appelle Moi en nous, au lieu qu'une horloge n'est autre chose qu'un assemblage." (The clock is the standing illustration in the investigations of the principles of the mechanical explanation.)

so that what is psychical was included, and the whole phenomenal world was brought under the causal relation.* But this extension is naturally accompanied by the limitation that the mechanism can not be carried over to *things in themselves*, so that ample room remains for a transcendental freedom. This wider extension of the concept has penetrated philosophy and popular thought as well; and accordingly the strict mutual dependence of individual phenomena serves as the decisive characteristic of mechanism.† The limit which Kant placed to such a concept is often neglected, and numerous misunderstandings arise from the confusion of this broader theory with the narrower physical one.

The specific definition which Kant gave to the concept of the organic was an inducement to the Constructive philosophers to use it most extensively. Following Fichte's example, Schelling, in particular, summed up all fundamental concepts of the universe in the principle of the organic as the "immediate ectype of the absolute substance," and everywhere defended its originality and superiority as compared with the mechanic. The principle was used to explain the thought-process,

* See v. 101: "For just that reason we can call all necessity of events in Time according to the natural law of causality the mechanism of nature; although we do not mean by this that things which are subjected to that law must actually be material machines. We have here in view the necessity of the connection of events in a sequence in Time, as they are developed by the law of nature; and we may call the subject in which this development takes place *automaton materiale*, or, with Leibnitz, *spirituale*, as the impulsive force of the machine is matter or ideas."

† The system of Herbart gives a good example of the wider philosophical use of it in the realm of the inner life. He attempted (iii. 255) "to dissect the organism of the reason into its simple fibers, the sequences of ideas, the production of which can be explained only by the mechanics of the mind."

as well as the entire development in the realm of nature. An "organic" * theory of law, of politics, of history was presented; and such a theory was considered far superior to any mechanic theory, which explained events by a process of mere external composition. Yet the Constructive philosophers did not, throughout, clearly establish this principle. They sympathized fully with it; yet it was often a confused feeling, which appeared here and there in their writings. They defended the independence of the whole, and the distinctive character of separate events. They maintained, in the political system, the individuality of the separate members. But, in their theory of history, they held to a gradual and legitimate development according to the method of natural growth.

The novelty in their system was not so much the principle itself as their use of terms, and their clear apprehension of the antithesis between organic and mechanic; for we might say that, taken in a strict sense, the entire theory only manifested a return to those earlier forms which are directly contradicted by the specific peculiarity of the science of modern times.

All Greek philosophers who favored idealism are agreed in representing the universe, and so, first the state, and then the human community, as a sort of organic existence; and, especially in the latter part of ancient philosophy, consequences were deduced from this principle very similar to those derived by modern philosophers.† So in Christianity, especially in the earlier centuries, the theory of the individual as a member of an organism, formed of course by the Church,

* For the organic theory of Politics, compare Schelling, vi. 575, *et seq.*

† See Marcus Aurelius, 7, 13: μέλος εἶμι τοῦ ἐκ τῶν λογικῶν συστήματος κτλ.

was often and forcibly asserted. In modern times, on the contrary, the individual, as endowed with reason and the germ of eternal life, has such preëminent significance that he can be subordinated to no general formation of the phenomenal world. The individual produces everything from himself, and continually asserts his superiority to his own creations.

Although we must recognize in the principle of the organic a general truth which is incontestable, namely, the denial of a simple composition from elements which are intrinsically indifferent to the connection ; yet, if it is at all clearly developed, we must most decidedly reject the specific doctrine as an antiquating retrogression.* Likewise the theory of historical development, as a peaceable process and a self-unfolding freed from all struggle, can be no longer maintained on grounds of fact, however much we may be compelled to recognize, in places, indications in support of this view. That theory may commend itself to the immediate perception ; but an exhaustive investigation shows everywhere a varied complication, a prominence of the individual, and of what, in our conception of it, is contingent, and shows also many hard struggles in the rise and fall of powers.

Moreover, the expression, from the beginning obscure, has, by its further extension, † grown so indefinite that it very easily becomes a mere hiding-place for

* There has been, too, from the judicial side, an opposition to the organic theory of the state. See Van Krieken, "Concerning the So-called Organic Theory of the State : " yet such opinions are still in the minority.

† Every theory which called itself organic was brought all the more into peculiar confusion as the higher estimate of the organic in nature was brought to bear upon it. It depended, first, upon the question whether the analogy of the organic was suitable ; and then, whether the theory based upon it actually added anything.

confused conceptions; and in no case does it give to the thought communicated the certainty of being accurately understood. And since the use of the word in no case has meaning except on the presupposition that the organic signifies for us what is original, and is very easily intelligible, and, as this presupposition is not at all admissible at the present day, it seems desirable to limit the term again strictly to the specific realm of physical phenomena. Here, at least, it comprehends definite groups of phenomena, and so prepares the way for investigation; while, in its wider use, even what is confused and problematical is made to serve as an explanation.

But a reaction against the great extension of the organic suddenly appeared in the realm of natural science. By the advance of science the doctrine has been more and more clearly established that the general laws of nature control also the forms of life, and that for this reason there is no occasion for a separate classification of specifically organic forces. The peculiarity of the vitalized formation as a highly developed system, and the singularity of many phenomena in this realm need not, on that account, be undervalued, provided we recognize the fact that everything apparently specific comes under these general principles, and proves to be caused by the application of comprehensive forces.* But, if the organic is to be considered, not as something isolated, but only as a part of the general development of events, it can not demand recognition as being decisively determined in its own nature, but itself becomes the most difficult of problems.

* K. E. von Baer correctly defines the problem, as "the reduction of the vital forces of the animal body to the universal forces or vital tendencies of the universe."

Yet, however much we must grant to mechanism full authority within its own sphere, it becomes necessary to understand clearly the extent and content of this sphere. The question arises at the outset, whether mechanism shall signify only the form of an event, as in its original meaning, or whether it shall include the cause as well. In the former sense, it is a theory which demands exact verification in the sphere of natural science. But, in the latter, it involves a judgment upon the ultimate nature of events. In the former sense, it can annex itself to a broad philosophical system; in the latter, it must claim an exclusive authority.

But, then, it is asked, whether the mechanical theory is to be limited to the sphere of nature, or whether it is to embrace the world of mind as well; and, in the latter case, the concept must of course be so broadened that the physical application of it can serve only as a special case. For investigation in nature it would be advisable to maintain the narrow interpretation of the seventeenth century,* since otherwise the forcible entrance of foreign characteristics can not be avoided; yet every looseness in definition must prejudice alike the method and the content of the entire realm of science.

When the question becomes a more general one in its bearing upon philosophy, it must be treated in a wholly different method, and will of necessity drive us to the assertion of something which shall supplement it. Especially in that case is mechanism presented to us as a method of conceiving the world which is peculiar

* Of course, in the extension of the doctrines of matter, force, motion, etc., the physico-mechanical theory also has been extended; but the question here treats of finer distinctions, which are disregarded in the usual treatment of the problem.

to us, and as a conception which involves many presuppositions. Mechanism is shown to be a power which controls a single system of relations; but what is fundamental to the relations and the combination of the many elements into a system, this it can not comprehend; and, moreover, if presented exclusively, it must destroy the possibility of these presuppositions. As the idea of the world itself presents to it an impassable barrier, so does it show within the world an impotence to explain everything in view of the facts of life and its essential individuality. Whoever might deny here the applicability of the mechanical explanation (in its philosophical sense), the more closely we examine it, the more evident is it that this explanation presupposes everywhere some cause which it is unable to formulate. The form of life may thus be understood more and more in a mechanical sense, yet not the least advantage is gained thereby for the mechanical explanation of life itself.*

TELEOLOGY.

The ancient concept of design, often used in philosophy since the time of Socrates, was, as is well known, first treated independently by Aristotle, who classified it among the four kinds of cause. Among the Latins, since Cicero, *finis* assumed a technical significance, while I find that Abelard first used *causa finalis*, and Wolff first coined the word teleology.† The German

* Lotze especially deserves credit for having made prominent both the significance and the limits of the mechanical, and so of having renewed the principles of Leibnitz. See his "General Pathology and Therapeutics as Mechanical Natural Science."

† See "Philos. Ration. sive Logica," cp. iii. § 85: "Rerum naturalium duplices dari possunt rationes, quarum aliæ petuntur a causa efficiente, aliæ a fine. Quæ a causa efficiente petuntur, in disciplinis hactenus defi-

language shows a curious development in its use of the expressions. Notker, according to his custom of imitating foreign terms as closely as possible, translates *finis* by "*ende*." Eckhart has "*ende*," "*zil*," and "*warumbe*." "*Ende*" and "*ziel*" are generally employed by the philosophers of the sixteenth century. Next in order, Luther, Böhme, and others have "*fürsatz*." "*Zweck*," which I can show first in philosophical use in the writings of Böhme, in the seventeenth century, suddenly took precedence of the other expressions, so that Clauberg, for example, translates *finis* only by "*zweck*," and Leibnitz, too, in his German writings, uses "*zweck*" and "*endzweck*" throughout, without making any definite distinction between them. After the beginning of the eighteenth century "*absicht*" (which was not used in the seventeenth century) appeared, and extended, especially through Wolff, into general use, so that it interfered with the use of the "*zweck*." But, after Baumgarten, the custom was established of using "*zweck*" for the concept *finis*, "*endzweck*" for *finis primus*, and "*absicht*" for *intentio* (*finis representatio*), and we see this usage gradually confirmed in the eighteenth century.* In our own day, finally, the numerous misunderstandings introduced by the word "*zweck*" have led K. E. von Baer to prefer, for investigation in natural science, the expression "*ziel*" (*zielstrebig*). Does not such a history of terms suggest certain problems in the concept itself?

The history of the doctrine of design is the history

nitis expenduntur. Datur itaque præter eas alia adhuc philosophiæ naturalis pars, quæ fines rerum explicat, nomine adhuc destituta, etsi amplissima sit et utilissima. Dici posset teleologia."

* Yet Plattner ("Philos. Aphor.," ii. 23) asserts that usage treats the words "*zweck*" and "*absicht*" as synonymous.

of a continuous contest. We can see the problematical character of the concept in the fact that this doctrine has always been called in doubt. Yet, on the other hand, the circumstance that men of the highest rank have always again assumed what was contested may serve to show that the question here is not one of simple error, and that the contest is carried on not so much between science and common sense as between parallel tendencies of science itself.

It is particularly necessary to discriminate between essentially distinct forms of the doctrine of design, for it has been, perhaps, the greatest cause of confusion, that wholly diverse elements have converged at this point. It is unavoidable that man should, at first, refer everything to himself as an active agent, and should wish to interpret all events as means for his own designs. Closely connected with this is the fact that such an idea exerts an influence upon the theoretical interpretation of the world. Yet it is as much the right as the duty of science strictly to oppose any such influence, for only after the destruction of this kind of teleology is a scientific conception of the world in general possible.

The teleology of the ethico-religious consciousness is incomparably higher. In this, it is the conviction of the absolute value of the problem involved in the life of the rationally free being which leads to the reference of all mundane events to this problem. As the object of this discussion of design, the individual, as a moral personality, stands always most prominent. But the relation of design to this problem is dependent upon so many presuppositions that it is advisable for philosophy to lay it wholly aside, at the outset, in its investigations. In so far as it presents a dogmatic system of physico-

theology, a conflict with science is unavoidable; and yet the question arises, whether the destruction of such a physico-theology is not more to the advantage of religion than to that of science.

Yet, beyond all this it must not be forgotten that there is also a strictly theoretical doctrine of design—a doctrine of design which has not come to us from ancient prejudices, and so been dragged along with them, but which has arisen in the clear light of day, and which, by supplementing and deepening knowledge, has been of valuable service to science. Whenever forms of Teleology which were unscientific or no longer satisfactory to scientific thought have been repressed, a new and higher form of Teleology has always arisen. Equally important reasons have been advanced both for and against the doctrine. The assailants of it have usually taken the lead; but, when they have believed that they have accomplished their undertaking, they have, as a result, only cleared the ground for new creations. An Empedocles and a Democritus were followed by a Plato and an Aristotle; Descartes and Spinoza by Leibnitz and Kant; an evident sign that we must recognize here a problem to which man is compelled always to return, without having been able to solve it decisively at any one point of its historical development; and that we treat here of a question which lies near the outside limits of human knowledge, and hence is affected by every disarrangement of those limits. Although this purely theoretical problem is not affected by the ordinary assaults upon Teleology, yet, on the other hand, there can be no doubt but that the principle involved furnishes directly nothing at all in support of the ethico-religious postulate; and that we do not consider here any practical interest.

The first general doctrine of design was presented by Aristotle, and with him, constituting as he did the culmination of Greek thought, it stands in the closest connection with the foundation of all philosophy. The world is considered as a vitalized and self-contained whole, to which everything individual is added as a member. It does not strive after anything lying outside of itself; but lives for itself, since internally executed activity and external realization coincide. This is the source of the theory, that everything individual in the universe is to be understood from the connection in which it stands, and also that no motion is aimlessly scattered, but that everything attains a final point where it passes into an intrinsically satisfied and self-realizing effect (*ἐντέλεια*). Aristotle, however, makes a specific use of these doctrines, only so far as he seeks to understand all the heterogeneity of organic formation by means of a single type. The normal form is the human, as being the highest. In the production of this the effort of nature includes all forms; and, although the aim is not for the most part attained because of the opposition of matter, still the discussion proceeding from it teaches how to classify diverse phenomena, and how to comprehend everything individual in its connections.

But the principle that every motion is directed toward a fixed goal was used throughout this system. Even the elements strive after a definite position in the universe, in order to obtain there external rest. Nowhere is there an effect carried out infinitely, a rectilinear motion without end. Since this principle in the realm of organic life is united with that of the superiority of the whole to the parts, the discussion of design obtains here a peculiarly rich meaning. The completed

activity of the whole is the goal toward which everything particular is to be directed, and with a view to which it is to be conceived.

Whatever judgment we may form of such a Teleology, it has greatly contributed to the subordination of the material universe to unifying points of view; and by it has been introduced the possibility of whole sciences, like those of comparative anatomy, historical development, etc. And in no respect was it behind the science of the time in which it appeared.

We can not deny that there is an antithesis in principles between this Aristotelian doctrine of design and the primary tendencies of modern science. It presupposed the Platonic doctrine of ideas by which events appeared as the realization in matter of forms acting out of time relations; while with modern thinkers matter and form coincide in a unity, and, in fact, in the unity of the process. It is not a combination of different kinds of being which gives us the process, but the process, rather, which gives us all being. Whatever formation may appear is to be considered as having its original source in the general process, and hence must always be judged simply as a provisional conclusion, and not as an ultimate end. The Aristotelian concept of the *ἐνέργεια* is given up; in mind and in nature the pressure is to the infinite; it always produces the new, and can be content with no attainment. The action of forces is, therefore, independent of fixed aims, and we can speak only of a sort of tendency which points to the infinite.

In the closest connection with this stands a second characteristic, the dissolution of the organic connection of the world, the recognition of the independence of the individual, with the subordination of all events to

simple and universal laws. It is these laws which protect the unity of the world; they are immediately manifested in every individual, and all particular formations can be reduced to these. It is no longer held that one specific form makes use of the forces of nature, and turns all motion toward itself. And so, too, the universe as an entirety is not considered a completed whole which refers to itself everything particular as an instrument. In place of the antithesis of parts and whole appears that of simple and complex; instead of, with Aristotle, interpreting the individual only through the whole, the form must be resolved into its elements to be scientifically conceived. It is, then, all things considered, the genetico-analytic character of modern science which necessarily destroys the principles of the Aristotelian doctrine of design.

Although these decisive reasons have not often been very prominent in the attacks of reflective thought upon that doctrine, yet they have determined the scientific development of the method of discussion, so that the treatment of the question has finally assumed an entirely new shape. Wherever design was defended, it was essentially changed from its earlier form. But its supporters are divided into two classes, since some combine it as well as they can with the primary principles of modern science; others wish to show it as something intrinsically demanded by those very principles. Among the former, the most prominent are Boyle and Kant, in his earlier writings; among the latter, Leibnitz and Kant, in his later writings.

Boyle teaches that a strictly applied mechanical theory needs design as its counterpart to make conceivable the tendencies observed in the phenomena of the universe and the rational order which makes itself

apparent.* The further an intrinsic character and essential connections are removed from the events of nature, the more necessary does it seem to be to supplement these events by something transcendent. But this defense of design involved a change in the general theory, since Boyle adduces the concept of cosmic designs,† to which the nature and relative position of individual forms must be subordinated.

With Boyle it was the immediately phenomenal nature of the world which led to the principle of design. But Kant, in his earlier writings, went a step further back in his analysis of principles. It seemed to him especially suspicious in the ordinary teleology that the contingency of the perfection of nature was necessary to the inference of a wise originator, and hence that any absolutely necessary order in the world should become a serious objection to that teleology. Yet, when he insisted that every special formation should be conceived as necessarily formed according to general laws, those laws themselves gave him the opportunity of bringing in design again with a new meaning. The fact that from extremely simple forces a well-ordered whole is formed by legitimate development, and that a multitude of what seemed to be mutually independent things are in reality united in a connected way, appears to him a decisive reason for believing that the whole originates from a supreme intelligence. The very fact that the forces of nature can produce this world without the interference of anything supra-mundane testifies that rea-

* See "De ipsa Natura," section iv.: "Harum autem partium motum sub primordia rerum infinita sua sapientia ac potestate ita direxit, ut tandem (sive breviori tempore sive longiore, ratio definire nequit) in speciosam hanc ordinatamque mundi formam coaluerint."

† See, especially, "Final Causes of Natural Things," Prop. IV.: "Cosmical, primary, and overruling ends."

son controls the world. All order is indeed a result of necessity; but, he says, "is this harmony the less strange because it is necessary? I consider it all the more so for that reason." (II. 138.) This doctrine comes pretty close to that of Leibnitz, which is to be judged in the same way, and which had considerable influence upon its formation. It can well be considered as the highest form of an identification of a scientific conception of nature with a religious cosmology. Yet here, too, although something situated above and beyond the world is necessarily involved in the design, we have a right to demand that the design be immediately and intrinsically combined with the world.

This last element, which must be furnished to justify the doctrine philosophically, was undertaken by Leibnitz, and by Kant in his later writings. From the outset, Leibnitz defended the doctrine of design as something coördinate with the explanation of efficient causes. He emphasized the fact that the two are in no way mutually exclusive, but the teleological consideration can be of great assistance to the ætiological. Yet, in these considerations, he does not go very far beyond the ordinary principles of design: his teleology essentially exhausts itself in mere invention; and he asserts distinctly that in ultimate analysis it is subordinate to ætiology.*

* For all this see "Works," 143 b, and Foucher, II. 357. In the latter place we read: "*Cependant je trouve que la voye des causes efficientes, qui est plus profonde en effet et en quelque façon plus immediate et a priori, est en recompense assez difficile, quand on vient en détail, et je croy que nos philosophes le plus souvent en sont eneor bien éloignés. Mais la voye des finales est plus aisée, et ne laisse pas de servir souvent à deviner des vérités importantes et utiles qu'on seroit bien long temps à chercher par cette autre route plus physique.*" In support of this, the fact can be adduced that many important discoveries of modern science are actually made in this way.

The peculiar service which Leibnitz rendered to the doctrine of design lay rather in the fact that he brought the teleological and the purely physical considerations into an intrinsic and essential relation. The problem, the prosecution of which leads him to a doctrine of universal design, is the nature of the general laws themselves. He considers these, like the whole order of the world, as something positive, in so far as they realize one of various possibilities; and the question now arises, whether this definite nature is not subordinate to some one particular point of view, and does not lead up to some one particular principle. And here it seemed to him to follow, from many considerations, that all laws of events are determined by the first principle that the greatest possible quantity of force is utilized. Everywhere the shortest paths to the goal are followed, and the simplest means to the end are chosen.* The world, because ruled by this principle, is judged to be absolutely complete and conformable to design, although, since it is a question only of the quantity of being, not of a definite quality, what is asserted is the form of conformity to design, rather than a definite purpose; it is a tendency which disappears in infinity, rather than a specific aim of development.†

Such a teleological theory is not coördinate with the ætiological-physical one; but, including the latter,

* See 147 b: "*Semper scilicet est in rebus principium determinationis quod a maximo minime petendum est, ut nempe maximus præstetur effectus minimo ut sic dicam sumtu.*" 605 b, he remarks, in view of the question, whether the same result could not be produced by pure necessity: "*Cela serait vrai, si par exemple les loix du mouvement, et tout le reste, avait sa source dans une nécessité géométrique de causes efficientes; mais il se trouve que dans la dernière analyse on est obligé de recourir à quelque chose qui dépend des causes finales ou de la convenance.*"

† Practically Leibnitz considers the world, not as complete, but as developing itself to completeness.

stands above it. It is not limited to any specific sphere, as that of organic life, but is related to all events, and is found to be especially fruitful in its explanation of what the ordinary method of treatment leaves as an axiom. Even the primary laws of motion, the whole method of causal agency, etc., are illuminated by it. For special investigations, it started from the maxim that the shortest way should everywhere be sought; but, since the ultimate aim was the most complete production of power in the universe, the power of the individual could give only approximate results in this direction; and a general problem was brought out, the solution of which could only gradually be attained in the advance of scientific discovery. Meanwhile Leibnitz held that the data given, in connection with their causes, were enough to justify the reason in its confidence in the general principle, and in admitting the unsolved mysteries of the universe, by the use of the well-known maxim, "What I understand of it pleases me: I believe that the rest, too, would please me, if I understood it" (p. 548 a).

Still, the event which is conformable to design is regarded, in this philosophical theory of Leibnitz, as something occurring within the world itself, since ultimately all events reduce to occurrences having their own intrinsic nature, while these are controlled by the form of conformity to design. Since the idea (the elementary magnitude of Leibnitz) involves immediately an inclination toward something else, and exertion consists in this inclination alone, the design, the moving force, will result throughout from activity and law. Design controls the world, because it controls the thought-activity, which is the foundation of all existence; of course that which is specifically human, the

power of reflection, is wholly remote from such a concept of design. We have a metaphysical concept, to which the psychological interpretation is subordinated as a special case ; but, nevertheless, it seems to be settled that the human illustration of design need not be thrown away, but finds its place in the great whole.

We need not ask, what doubts can be started concerning such a doctrine of design. This much is certain, that it is raised above the customary objections. Especially would it be absurd to contrast this theory with a strictly causal investigation of Nature, since the theory starts from the very desire to form a causal conception, with which desire scientists usually are content to stop. The idea of design, which determines everything from one principle, seemed indispensable, even for the complete removal of accident from the world. If we should make any objection to this doctrine, we should say that it attempts too much, rather than too little. It necessarily presupposed an unlimited and indestructible faith in the power of the reason concerned in the act of knowledge ; and it was the destruction of this presupposition, not the attacks of adversaries made upon the theory itself, which finally repressed it.

Such an abandonment of the presupposition here involved appeared in the later writings of Kant ; since all causal connection was judged to be a form of knowledge which is purely subjective. Hence, however design might be defined and employed, it was nothing more than one method of our human comprehension. But, further, all the peculiarities and excellences of the Kantian method appear in his treatment of the subject. He undertakes at the outset to give a distinct definition of the concept. Design is (v. 439) "the perceived effect, the perception of which is at the same time the

reason which leads the rational acting cause to determine its production," and that is accordingly considered conformable to design (vi. 385), "the existence of which seems to presuppose a previous idea of the same thing." It is evident that in this way the concept is much more strictly and specifically defined than it is by Leibnitz, and at the same time that such a concept can never be used, otherwise than symbolically, outside of the realm of what pertains specifically to the soul. But now experience leads our faculty of judgment (v. 378, *et seq.*) "to the concept of design in nature only when we must predicate a relation of cause and effect, which predication we are able to regard as legitimate only because we include the idea of the effect in that of the causality of the cause, as the very fundamental condition of the possibility of the former"; and, so far as this goes, it can be said (v. 383) "a thing exists as design in nature when it is of itself cause and effect." At first this concept is applied to organized being; but from that we are necessarily led (v. 391) "to the principle that all nature is a system controlled by design, by which principle all the mechanism of nature must be subordinated to an accordance with the dictates of reason." The ultimate ground of this is, that our understanding makes a distinction between the universal and the particular. The particular, regarded from the position of the universal, seems to be contingent; and hence, to establish a connection, design must be introduced; though, if we were to judge the particular in its relation to a universal which is regarded as a synthetic whole, such a necessity would not arise. Design thus serves us by filling up the gap between the universal and the particular, the possible and the actual.

It is clear how far this doctrine is related to, and how far divergent from, that of Leibnitz. In keenness of conception the Kantian theory is unquestionably as much superior to the Leibnitzian as it is inferior to it in influence upon general investigation. Yet it may be that, in the development of his first principle, Kant brought out more prominently the fact that mechanism, as well as design, is thus tinged with subjective elements; also, that every advance in the mechanical conception, so far from repressing, rather demands the teleological conception. For, with every advance in that kind of knowledge, the chasm between universal and particular, possible and actual, becomes greater, and so the connection which the idea of design offers becomes all the more necessary.

The successors of Kant attempted to go beyond the presuppositions of the Kantian doctrine. The Constructive philosophers tried to prove that what they hypothetically assumed as an intelligence which knows by intuition actually existed.

The scientists, however, endeavored to dislodge the concept of design from the realm of organic life which had been adjudicated to it, and, after many vain attempts, they succeeded, at any rate, in advancing one step by the doctrine of Darwin, according to which it seemed possible to understand the adaptation apparent in the world without having recourse to the general principle of design. The maxim of Leibnitz—to explain everything by means of the smallest amount of force—could be fully realized here, as Darwin expressly appeals to the *lex minimi* formulated by Maupertius; yet this maxim was now freed from its original connection with a teleological conception of the world. But, after the doctrine of design is thus ban-

ished from the natural sciences, we lose all interest in its philosophical application, and so it seems ultimately to be given up, and the supporters of teleology are compelled to see themselves driven out from modern discussion in company with the supporters of astrology.

Perhaps this historical discussion may serve to moderate this "teleophobia" ridiculed by K. E. von Baer. It is especially necessary that those who oppose teleology should deal with its scientific forms, and should not waste their attacks upon forms which have never kept up with the advance of the investigation. The consideration of the more important forms, which the philosophical doctrine of design has assumed, shows us especially its complete distinction from all the theories held in popular thought. There has been no assertion of any relation to specifically human interests. Design has been defended, not as the peculiar property of particular realms of its application, but as including the whole of nature and the world. Mechanism, as the form of events, has been everywhere presupposed and recognized;* and the discussion of design has been undertaken purely in the interests of a causal comprehension of the world. And, indeed, what was thus defended was not a material design, lying somewhere outside of the world, but only the form of conformity to design found within the world, and defended in the interests of a systematic monistic cosmology. The particular element which design was supposed to provide for this end differed, of course, according to the general theory; but the fact that even the most critical

* Mechanism can, in general, be opposed to the doctrine of design only so far as the latter presupposes that every event is ultimately to be conceived under the causal relation.

thinkers believed that they must reduce again to unity the world which had been analyzed in their investigation, and that, in this endeavor, they all had recourse to design, should make it evident to us that the question here is not simply one of individual mistakes.

This leads, moreover, to such a result that design stands everywhere in a close causal connection with the distinctive feature in the whole cosmology. Even a certain connection of development could be found to be manifested in the fact that the earlier forms of the doctrine are not wholly rejected by the later, but are only degraded to the position of subjective maxims. What Aristotle used as really valid, Leibnitz would defend as valuable in its suggestions; and what Leibnitz himself asserted is maintained, in their own way, by Kant, and even by those who oppose design altogether.

We easily see, from all this, how many difficulties and doubts such a philosophical doctrine of design has to contend against. It has to suffer, from the outset in the discussion, from the fact that it can be justified, not by any special topical consideration, but only by a systematic cosmology. If we approach it as an isolated problem, its principal elements can not be rendered valid, and every positive assertion must be regarded as arbitrary.*

Yet, without treating the subject specifically, the use and the meaning of the concept can be assailed. The doctrine of design is employed in the theory of the unity of the world; but is not this theory itself in the highest degree problematical, and incapable of being justified? And with what right is a concept, which

* Accordingly design, in its leading features, is not a scientific, but a philosophical problem.

is valid only within a narrow sphere, extended beyond that sphere into the universe? However worthy of consideration such doubts may be, we can allow them to be ultimately decisive for us only when we misunderstand the distinctive peculiarity of our judgment and of all our primary concepts, and emphasize one point only when the whole mental action should be considered. In the formation of our ultimate concepts, we must everywhere start out from ourselves; the only question is to form a connection with something essential in our nature.

But even such a significance in design is disputed. In our own life, as well, it seems to be something incidental, derived, subjected to the power of reflection. Yet the mistake in this can be easily pointed out. The special meaning of conscious design is substituted for the form of the activity of design itself. The latter alone concerns us here. Thus regarded, design does not arise simply incidentally in our life, so that in some way it is a product of the reflective activity; but the possibility of reflection itself presupposes design. And, however men may be mistaken in their use of it in the sphere of reflection, still the decisive facts are that they can form designs in general, and that they can think and act under the form of design far beyond the limits of all reflection.

Then, in the use of the concept outside of the realm with which we are best acquainted, the dilemma arises that we either give an anthropomorphic form to the idea of the world, or that, by abstract comprehension, we deprive the concept more and more of meaning. Yet we might ask at what point of philosophic investigation one believes that he can escape this dilemma. Though our concepts of the universe ever remain in-

adequate, shall and can we for that reason give up investigation?

A peculiar difficulty, then, is involved in the employment of design, from the fact that it makes use of an idea of the reason which rises above all phenomena, since it was undertaken in the interest of a monistic connection of phenomena in the world; but the world is not, by any means, given to us as a unit and a whole. Yet this question, too, becomes at once part of a wider one, because we are concerned here, ultimately, with the decisive problem of the whole doctrine of knowledge—with the relation of thought to the world, and with the meaning and the significance of the activity of thought. According to its relation to this problem, the use of the principle of design must appear either an arbitrary fancy or a duty. Yet to decide between these alternatives is not a matter so perfectly simple, especially if we bear in mind the fact that even a negative answer is still an answer. Even if we should decide to make use of design, then, too, we must not forget that it can not give us a completely exhaustive conception of the problem, but can only serve, by means of the concept of the activity of design, to bring us in some measure nearer to fundamental relations which are otherwise incomprehensible. But, even if we can approach a truth only mediately, still we should not question the fundamental principle involved, and we should not reject the means employed if they are of real service to that approximation.

Other difficulties are added to all these, and complicate the question more and more. And yet, without any regard to what we have positively attained in the contest, the problem is valuable and significant to us, because it shows us the incompleteness and insufficiency

of the theories with which we so easily round off our ideas of the world. To whatever limitations and embarrassments our thought and endeavor lead us, the process can not be regarded as something unimportant. For there is a value to us not only in those judgments which add something new to our knowledge, but also in those which teach us more rightly to value our possessions, and which open to us an outlook into the universe.

CULTURE.

Παίδεια μὲν οὖν φέρει καὶ νίκην, νίκη δ'ἐνίοτε ἀπαιδευσίαν.—PLATO.

As the concept of culture belongs far more to common life than to any special science, the expression was in general use long before it found an exact definition in philosophy. In the latter part of the ancient era, as from the time of the Renaissance, the phrase *cultura animi* was often used, and the phrase was until recently interpreted far more figuratively than it is now. Bacon first attempted to insert the concept in a philosophical system, when, in ethics, he contrasted with the determination of the highest good the investigation of the way in which the mind is led to it, and called this process culture, the “georgics” of the mind.*

Although culture is here treated as a part of ethics, it assumed, later, an independent coördinate position, so that it becomes necessary to determine more precisely their mutual relations. In German philosophy there are two antagonistic principles, and, again, it is Kant who brings out the distinction the most sharply. For, when he understands by culture the “production in a rational being of an ability to accomplish its desired

* See “De Augm. Scient.,” vii. chap. 1: “Partiemur igitur ethicam in doctrinas principales duas; alteram de exemplari sive imagine boni, alteram de regimine et cultura animi, quam etiam partem georgica animi appellare consuevimus. Illa naturam boni describit, hæc regulas de animo ad illas conformando præscribit.” See chap. 3.

aims in general (consequently in its freedom)," he leaves the settlement of the aim itself entirely an open question, and culture and ethics become distinct.

Fichte, on the other hand, defended their identity. When he included the ethical problem under the elevation of the mind to control over all events, and closely united form and import in the concept of freedom, it became possible for him to subordinate to culture the entire content of life. He makes culture (vi. 86) the "exercise of all one's powers in the design of complete freedom, of complete independence of everything which is not ourselves, our pure selves." But he includes all other problems in this, so that "nothing in the world of sense, none of our impulses, actions, or passions, considered as phenomena, have any value, except in so far as they affect our culture." Religion, science, and virtue are expressly reckoned as the higher aims of the cultured reason (vii. 166); culture also creates the political aim (vii. 146), so that the state which the philosopher defends can be called a culture state.*

The modern estimate of culture thus dates back primarily to Fichte, and he gave typical expression to the one principle which lies at the basis of the whole modern theory—the principle that the ultimate problem of the life of the individual and of the mass consists in this, that all the forces given to man should be

* This concept is opposed to the comprehension of the state as only a "juridical institution." But at first he drew a contrast between the culture state and the national state (vii. 212). "What is, then, the Fatherland of the truly educated Christian European? In general, it is Europe; in particular, it is, in every age, that state in Europe which is the most highly cultured." Fichte learned, later, to place a higher value upon what is national, although it was always of value to him (this is brought out also in his "Reden an die deutsche Nation") only as an expression of something common to mankind.

fully developed, should be increased infinitely, until they attain power over nature, over the life of man, over the world, and then arrive at the pleasures in existence which arise therefrom. The distinctive peculiarity of modern life consists in the fact that this is presented as the essential and comprehensive problem, and that all special aims are made subordinate to it.

To the ancient world, also, the development of power was considered important and essential; what was dormant in man should be awakened to living activity; what was formless should receive form. But it was supposed, at least in the highest attainment of Grecian thought, that the development was always directed to a goal fixed by nature, and from the beginning was controlled by regulations which referred to this goal. Greek philosophers never raised the question of an infinite advance, of an unchaining of forces, with no determination of their tendencies. Education, which with them is devoted to supplementing and supporting nature,* is, consequently, conducted from the beginning with a zealous care for the upholding and management of the activity of the soul: all powers are judged to be useless which are not subordinated to valuable aims.† But, in general, all development, as simply an endeavor, forms a mere preliminary to an activity which is completed in itself and externally manifested; this gives both the goal and the measure of the development.

All this is true of the life of the mass as well as of the individual. With the aggregate, also, not every power should be developed, but only those which can

* See "Arist. Polit.," 1337 a, 1: *πᾶσα τέχνη καὶ παιδεία τὸ προσλείπον βούλεται τῆς φύσεως ἀναπληροῦν.*

† See Plato's "Republic," vi. 491, *et seq.*; Aristotle's "Politics," i., chap. 2.

arrive at a completed activity of life, so that, under the given relations, there is only a very small part of mankind which lives itself out fully, and attains the pleasures of existence which spring therefrom. The advance of mankind does not go on infinitely, but moves toward fixed goals, then to give place to a retrograde movement. The infinite in life and in doctrine signified the endless and indefinite; but this was regarded as something undesirable, in view of the comprehensive concept of the value of order.

This whole theory was endangered in the decline of ancient thought, by the weakening of the belief in real goals in the world which surrounds us, and, consequently, the development assumed a more formal character. Although we, perhaps, might call culture the defective way of conducting life to which this theory led, still it lacked that element which gives its most decisive significance to modern culture, the power of comprehending all the relations of life and of striving after a renovation of the entire condition of the world.

In Christianity the purpose of desire and action is incomparably more important than the power developed by it or its actual execution. Innumerable utterances of Church fathers would admit of the interpretation that they were opposed to the development of culture. Yet their real wish was to make prominent the superiority of the ethical element, and to justify the withdrawal of attention from the more external activities to the intrinsic nature of man's character. It was often the most comprehensive and critical investigators who believed that they could not degrade deeply enough all that pertains to the simple improvement of powers, as contrasted with their ethico-religious use. In such utterances, too, the peculiar kind of intrinsi-

cally empty and decaying culture which then existed can not escape notice.

Yet, more than all this, we should notice that Christianity is essentially connected with the problem of culture, in that it presupposes an attempt to exercise every power in order that each might assume its own position. Only when man has done his utmost in the struggle after truth and fortune, and is moved to his innermost depths, and becomes conscious of impassable barriers, can the peculiar nature of Christianity be fully understood and justified. Wherever the element of culture is restrained and esteemed of little value, there, along with its essentially peculiar nature, the inner truth of Christianity will be threatened. But, since the primary presupposition of culture was not made an integral part of the Christian system, the further development of that system was exposed to the danger of laying aside the element of culture, or of recognizing it only so far as it immediately served its own ends. There has been practically, in the course of its history, no recognition of the principles of the problem of culture, and no intrinsic adaptation of it to Christianity. Culture has, as a whole, remained a separate province by the side of Christianity; and an indifference to all questions which lie outside of the "specifically" religious sphere has been brought to light, and even paraded on the part of the supporters of a strictly dogmatic idea of culture—an indifference which shows the unfitness of this principle to properly treat and estimate the whole circle of human interests.

Modern thought has assumed a certain form of opposition to this principle of Christianity. There has been an immeasurable extension of the sphere of life. It is not simply this or that particular aim which is al-

lowed to lay claim to all action, but whatever can become a question of human activity is to be taken up and developed. It is not a definite quality which gives a decided value to action, but the highest task is the action itself—the development of power, the increase of vital activity. Living itself is the aim of life. Nothing can remain quiet and established; and, if it is brought to its complete effect, its result becomes at once the starting-point of a new development; new faculties are ever formed by the advance, so that the pressure goes further and further toward the infinite. Accordingly, modern life is characterized by its restlessness; the glance is ever directed toward the future; the desire is never satisfied, so that there is no longer any place for the ancient concept of an activity which finds rest in itself—the Aristotelian “energy.”

This definition of life is not originally supposed to contradict the others, but to include them all. Whatever of power was offered for the attainment of any particular aim should be recognized and accepted, on the condition that it subordinate itself to the decisive struggle after completeness of life.

But in this way the ancient principle receives an essentially new significance, as becomes particularly prominent in the problems of ethics. The question here is not of an inner change, a “regeneration.” But perfection (*se perfectionner*) becomes the aim; yet this perfection is only the outcome of Being itself.* When the other questions also are included in this way under the one struggle for completeness of life, everything

* All the leading thinkers of modern times identify *perfectio* and *realitas*, and Leibnitz says, still more definitely, *perfectio nihil aliud quam essentiae quantitas* (147 b). But, in general, all definitions of value are reduced to that of force.

should be used, nothing thrown away as useless. And, since the aroused activity finds its value not so much in its external production as in the inner exertion of power, the deepest depths must be penetrated, and everything motionless must be brought to life and motion.

Externally and internally as well, the striving, creative mind has an infinity before it; not only does it produce a whole world from itself, but it ever takes it back again into itself, so that the external becomes the internal, and the mind above all increases its own superiority over external things. If, in such a connection, the mind forms, according to the marked expression of Nicolaus Cusanus, a "universal seed" which unfolds itself into the world, then upon its development depend meaning and fortune for the life of the individual as of the whole. We have to think even of the universe, in this connection, as progressing infinitely.*

But, however we may include all particular developments in this universal one, and regard the question of culture as absolutely universal, still, as a matter of fact, there are always definite conditions by which the

* Leibnitz, "German Writings," ii. 36: "The perfection of creatures, and so of ourselves, consists in an unimpeded vigorous impulse to new and ever new perfections." Wolff and his school defined the highest good as *perpetuus sive non impeditus ad majores perfectiones progressus*. The concept of progress appears throughout ancient thought. Plato and Aristotle have for it the expressions *ἐπίδοσις* and *ἐπιιδόναι*; but later the Stoic *προκοπή* became far more prominent, and we find it used (as in Polybius) in the same sense in which we now use the *fortschritt*. The idea of a progress toward the infinite was suggested by the Neo-Platonics and Mystics, but has been fully carried out only in modern philosophy, and there first by Nicolaus Cusanus. This idea reached its culmination in Leibnitz (150 a): "In cumulum etiam pulchritudinis perfectionisque universalis operum divinorum progressus quidam perpetuus liberrimusque totius universi est agnoscendus, ita ut ad majorem semper cultum procedat," *et seq.* The expression *fortschritt* (progress) seems to have become a fixed term in the latter part of the last century.

activity is controlled, and definite directions in which it moves. Our life is subjected to historico-psychical influences which specify aims and endeavors, so that there can no more be a culture than a universal religion without detailed boundaries. Hence modern culture, in the comprehensive sense, occupies a peculiar position, which must be recognized and tested before we can venture to pass judgment upon its value.

We notice particularly here the conscious refusal to admit anything transcendent. The development of power is supposed to fall wholly within and to penetrate this world. Whether the world be regarded as a whole formed by the reason or as a collection of phenomena, the principle is the same, that all action refers to it and proceeds within it. What is not attained here is, in general, not attained at all, and what is not made use of here is absolutely lost. All demands of the reason must be met here, all obstructions removed, all opposition overcome. A contradiction, a difference between reason and reality, can nowhere be admitted. From all this it becomes a necessary principle that all power should be exerted at every moment; and thus modern culture receives a radically changed character, a fact of which its leading advocates have been clearly conscious.

But intelligence serves as the peculiar substratum of life and development. When modern psychology seeks to reduce all mental events to processes of knowledge,* when practical philosophy makes happiness and capacity dependent upon knowledge, and metaphysics seeks to produce the whole world out of thought, these scientific doctrines only express the common conviction

* Nicolaus Cusanus says, i. 91 b: "Ego mentem intellectum esse affirmo."

of mankind. This conviction also makes knowledge the source of all power and all good ; ignorance, on the contrary, is held to be the source of weakness and evil. Knowledge gives us control over nature, so that we can bring all its forces into our service, and thus immeasurably increase our own power. But it gives us no less power over ourselves and our race, whose destiny can be influenced by us by reason of our insight into its controlling laws.

If, in view of all this, increase of knowledge is to be considered the task and acquisition of life, the progress in which we believe is more exactly defined as an intellectual one.* Moreover, knowledge has a wholly different nature and position in modern life from what it had in earlier times. It is not a quiet intuition of the world, a *θεωρεῖν*, but a transformation of that intuition, in order to survey that world within its own sphere of power. The proposition that knowledge is power is now asserted so that knowledge and power are considered synonymous. The demand that theory and practice be closely united is found in all the systems since the sixteenth century, and is extended more and more until it claims that knowledge and life shall coincide. Thus a new place is made for science in the historical development. Hegel's statement that the owl of Minerva first begins its flight in the dark may be entirely appropriate as applied to ancient thought ; in our own day science carries the torch before it. What has been unconsciously formed in history is not conceived as supplementary and thus justified before the reason, but science sets up its aims of itself, and then demands that their execution follow in actual life.

* See Nicolaus Cusanus (ii. 188 a) : "Posse semper plus et plus intelligere sine fine, est similitudo æternæ sapientiæ."

But all demands which arise from the idea of culture receive peculiar importance from the fact that they are made valid, to a full and uniform extent, for every individual. The question in modern life is not that of a simple general process to which the individual is annexed bodily as a member or element; but, just as in the theoretical cosmology we have seen the antithesis of particular and universal overcome by the concept of law, so here, practically, the individual is not something under or in the whole; special existences are rather, to use Leibnitz's celebrated expression, *partes totales*. Each one carries in itself the whole world, since it forms a wholly rational power which extends itself infinitely. The historical development thus works itself out, not above, but in the individuals. In every individual the entire world-process goes on, so that we have an infinite number of infinite worlds. This theory is conditioned upon the principle of the essential similarity of all individuals, so that this, too, is defended by scientific thinkers.* No less necessary is the condition that the development of the individual must correspond to that of the universe, and that the latter, with all its empirical imperfection, still always finds itself on the right path. No proposition is more hostile to the modern idea of culture than the doctrine of a radical evil.

If these conditions be granted, we look out upon immense problems extending far beyond the field of vision. If the individual be the only object endowed

* Descartes, perhaps, expresses most simply the general principle when he says (in the beginning of the Method): "Rationem quod attinet, quia per illam solam homines sumus, æqualem in omnibus esse facile credo." The reason adduced here is also the basis of Fichte's doctrine of the similarity of everything "which has the human face."

with life, we must assign to him the entire result of culture, and, above all, must make all the fruit of intellectual labor attainable to him. Nothing more can be said of an isolated position of prominent individual thinkers and an esoteric kind of knowledge: it is rather our duty to carry the light from the heights into the valleys, and to spread abroad everywhere enlightenment and education.*

It is not necessary to prove exhaustively how much mankind is indebted to this general idea of culture, how the whole method of life has been changed by it, how all our thought and feeling have been determined by it, so that even those who would oppose it everywhere betray its influence, and insensibly modify the ancient theory which they try to defend. But, were we to call attention to the most prominent points illustrative of this, the increase of the power of man over nature and the world and the deliverance and elevation of the individual would be most conspicuous. Would these advantages be seriously given up by those who hardly ever speak of modern culture except to find fault with it?

And yet, can it be denied that the execution and realization of its leading principles have led to ever deeper problems, complications—even catastrophes, and that even now, however exaggerated many of the fears regarding the immediate present may be, we are in a crisis which embraces the whole world of culture? The danger to modern culture arose from an intrinsic contradiction—the relation of what we might call the imagined individual of the ideal world to the empirical

* The expression *bildung* (training) as used here is comparatively recent; only since the middle of the last century has it been transferred from physical to mental development.

individual of the phenomenal world. Since the former could not be raised too high, the chasm became ever greater, until the bridge parted, and the empirical individual then demanded his own share, and began to estimate the advantage which the modern definition of life brings to himself.

If the question were put in this form, the answer would come promptly. The modern idea of culture, with its immeasurable undertakings, demands both a combination of many forces in common action and an activity which pervades all races and times; whatever of that the temporary life of the individual can comprehend disappears in comparison with the whole, and diminishes in proportion to the advance of the whole. And this, indeed, is especially true in view of a preponderantly intellectual definition of the problem of life, while no great use can be made of the means which are offered as a remedy. If, for example, in the completed results something is to be bestowed upon the individual which he can not intrinsically live out, it is evident that the very thing is thus lost which in our day constitutes the value of knowledge—its pervasive and transforming power. But if the subjective understanding of the empirical individual would lay claim to the rights belonging to the general reason, and would refer everything to the passing moment and to what is serviceable to itself, then culture itself is essentially destroyed, together with its general work and its historical foundations. This danger was very evident in Rousseau; it increased as the idealistic tendency, which regarded man as a participant in an intelligible world, was repressed; and, with all which it involves, it remains concealed from sight only because the empirical individual at first, as a result of its historical development, has its own king-

dom in interests and feelings of a general nature, which it judges to be adapted to itself.

But, beyond this, the faith in the omnipotence of the intellectual has suffered many severe shocks. Disregarding the difficulties which oppose point for point the scientific application of its fundamental principle, we find that in popular thought doubt and distrust continually increase, however much the ancient thesis may be externally maintained. The doctrine, that by advance in "education" all the wounds of mankind can be healed, is no longer held in the confident faith of the day. One often attempts, to be sure, to lay all the blame upon semi-education, and, as this is abused, to heap praises upon true knowledge; but we thus establish at the outset a contrast which not only is far removed from but exactly contradicts the fundamental tendencies of our own day;* since the question at once arises, what is the source of this semi-education of the extent of which other times knew nothing?

Yet by all this the further question would be suggested, whether it is not in the imperfect intellectualistic definition of life itself that we find the reason for the mistake, by which doubt is naturally directed not against knowledge in itself, but only against that exclusive control given to it which keeps in the background all other elements.

All this leads to immense thought-conflicts, which are all the more irrepressible and fatal the more our

* Periods of active thought have ever the peculiarity of seizing upon and making prominent the imperfect side of an idea. The sharp distinction between a "true" and a "false" interpretation already shows the beginning of a crisis; as, in general, this distinction often only conceals the decline or the surrender of the original conviction. One is usually on the verge of an inconsistency when he insists so zealously upon the "true" form of a principle.

day insists upon passing judgment upon everything there is in the world which surrounds us. Since everything comes under a single series of events, and this serves as ultimately definitive, every gap must become a defect, every contrast a contradiction.

Yet the more the power of the idea of culture is prejudiced by such prominence of defects and contradictions, so much the more increases the danger of a compression of the original sphere of life, the danger that some of the heterogeneous elements which were at first included in that sphere might later be set off as foreign, and even hostile. Particularly, both at the outset and throughout the discussion as well, should mind and nature find equal recognition, as in science both speculative and inductive tendencies have worked together. In the contact and mutual growth of both tendencies is found by no means the least cause of the vigorous development of power in modern times; so that this must suffer a sudden decline as soon as either of these tendencies is repressed in thought or in life.

At the time when thought-power is bold, man feels strong enough to take up into his own life's plan the results of earlier developments. Perhaps in olden times, in spite of the lack of exact knowledge, men stood in a closer relation to each other than we do to-day; but, in any case, they wished to appropriate to themselves the substance of Christianity, and to use it to supplement and to deepen life. We can call it only an unworthy accusation to explain, as a mere regard for the ruling power, the position in reference to Christianity occupied by men like Spinoza, Locke, Leibnitz, instead of seeking a deeper reason for it—a reason which led thinkers of all schools, amid all the differ-

ences of their interpretation of Christianity, to be unwilling to give it up, and to make the greatest effort to unite it closely with modern ideas.

But, while there was thus a pressure to extend the narrow circle as far as possible, and to recognize in everything foreign some relation based on the unity of reason, the opposite tendency soon developed itself—the tendency to return to the specific, and so to what was contradictory of this. The development of culture was more and more limited in its import with every external extension, and, in contrast with the other forms of life, assumed that negative character which in the realm of mind, by its limitation of the horizon, finally injures its supporter far more than do its active opponents.

This new turn of affairs was unquestionably occasioned, not by the arbitrariness or the malice of individuals, but by an inner necessity. But for this very reason it is a fact of the greatest importance, that the idea of culture has narrowed more and more, and, what is worse, has become more superficial. For, the more it was set off by itself, the more its contradictions disappeared, so much the less opportunity was there to penetrate its depths and to solve the problem by introversion. How infinitely broader, freer, and deeper is the definition which a man like Leibnitz has given to the problem and meaning of culture than we find to-day in its most famous advocates! We often reproach other ages for narrowness and one-sidedness, and not without reason; but with the narrowness was not rarely united a grand depth of life; and is it not worse than any kind of limitation to have a narrowness of treatment which can be comprehensive only because it understands nothing of the inner nature of life?

It is unavoidable that such a state of affairs, which

endangers the acquisitions of centuries of conflict, should excite a doubt concerning the principle of culture itself; that this principle should be blamed for all the improprieties and deteriorations of times and of individuals; that every specific development should be attributed to the conception itself; and that the permanent limits and imperfections of human life should be reduced to an essential and irresistible tendency to a narrowness of content in the concept of culture. In view of such unjust and often paltry attacks, it becomes a question, how we shall defend both the significance of culture and the original aims of modern thought. Wherever the limits of culture in general and of modern culture in particular may lie, no exhaustive development of life and the world is possible without that development of power in which modern times find their goal, without a tendency of the individual toward the universe in all the fullness of its import. The ethical principle, too, which is not rarely opposed to culture, can be advanced only in the general life of mankind where action finds a rich and universal significance, in which the individual is apprehended in his whole being, is aroused in his inner nature, and is raised to active work beyond himself. Where the development of power is not attempted, everything which can come down to man remains for him something external, and the most complete life becomes paralyzed when it is not given up to the exertion of a living energy.

INDIVIDUALITY.

“L’individualité enveloppe l’infini.”—LEIBNITZ.

IN our discussion of the principle of individuality we take the liberty, as before, of glancing first at the history of the word and the concept. *Individuus* was used from the time of Cicero as the translation of Aristotle’s *ἀδιαίρετος*, or of the *ἄτομος* of Democritus, so that it serves to denote that which can not be further dissected.* *Dividuus*, from the beginning, was employed as its opposite. This was its chief meaning in the middle ages.† But at the end of the ancient era that signification of the term began to come into vogue which later became controlling. Developing the concept of Porphyry, Boethius calls *individuum* the single object as unique;‡ and this usage was retained in the

* See Seneca, “De Provid.,” 5 : “Quædam separari a quibusdam non possunt, coherent, individua sunt.” Notker translates *individuus* by “*unspaltig*.”

† Hence we must take care not to interpret the expressions of the middle ages strictly in the modern sense.

‡ See “Com. on Porphyry” (ed. Basil. 1570, p. 65): “Individuum autem pluribus dicitur modis. Dicitur individuum quod omnino secari non potest, ut unitas vel mens; dicitur individuum quod ob soliditatem dividi nequit, ut adamas; dicitur individuum cujus prædicatio in reliqua similia non convenit, ut Socrates; nam cum illi sunt cæteri homines similes, non convenit proprietas et prædicatio Socrates in cæteris, ergo ab iis quæ de uno tantum prædicantur genus differt, eo quod de pluribus prædicetur.” Prantl quotes from Porphyry (i. 629): *ἄτομα λέγεται τὰ τοιαῦτα, ὅτι ἐξ*

logico-metaphysical discussions of the middle ages, and was gradually extended until it came into wider and general employment through Leibnitz.

The concept which lies beneath the term was first formulated and defended by the Stoics; but the Epicureans and Skeptics took it up at once, each, in fact, to make use of it for their own ends. With the Stoics the doctrine of the individual distinction of all beings is an integral part of a systematic cosmology. From the idea of the perfection of the universe arose the proposition that each single object is distinct, and that every one contributes something peculiar and indispensable to the whole. It was in accordance with their whole style that they should exert themselves to the utmost to give the sharpest possible expression to this principle; no two hairs, no two leaves, to say nothing of two living beings, are to be considered as alike.*

The Epicureans, on the other hand, defended the significance of the individual in order to justify the independence of each one, while the Skeptics used the

ἰδιοτήτων συνέστηκεν ἕκαστον, ὧν τὸ ἄθροισμα οὐκ ἂν ἐπ' ἄλλου τινός ποτε τὸ αὐτὸ γένοιτο τῶν κατὰ μέρος, and, in the same place, from Boethius: "Incommunicabilis Platonis illa proprietates Platonitas appelletur." How little change was made in this definition in the lapse of time is shown by the definition given by Jacob Thomasius, the teacher of Leibnitz: "Individuum est quod constat ex proprietatibus quarum collectio numquam in alio eadem esse potest." *Individualis* appeared in the first half of the twelfth century (Prantl, ii. 129, 131, 141); *individualitas* is found in Avicenna (translation): it was adopted into modern usage especially by Leibnitz.

* See Cicero, "Acad.," quæst. ii.: "Dicis nihil esse idem quod sit aliud, stoicum est quidem nec admodum credibile, nullum esse pilum omnibus rebus talem, qualis sit pilus alius, nullum granum," etc. Seneca, "Ep.," 113, 15: "Nullum animal alteri par est, circumspecte omnium corpora: nulli non et color proprius est et figura sua et magnitudo." 16: "Tot fecit genera foliorum: nullum non sua proprietate signatum." Pliny, "Nat. Hist.," lib. vii.

concept of an individual distinction (mental and material) as a weapon against the possibility of any universally valid knowledge.

In its interpretation of this principle, the Neo-Platonic school goes decidedly further. Not only does Plotinus base the peculiarity of individual existence on the diversity of the creative acts of reason (and this in a method which transcends all experience), and thus clear the way for the new forms of the doctrine,* but, further, it is asserted by him, and still more by his followers, that every individual in a peculiar manner contains intrinsically the whole world, and so that it is the problem of life to fully develop what is thus intrinsically given. The ancient doctrine, that the little world is an image of the greater, thus receives definite meaning and increased importance.†

The middle ages gave to the whole question a predominantly logico-metaphysical interpretation. The most important discussions here are those of Duns Scotus upon the relation of the universal to the particular, and of the necessary to the contingent; and the way

* See Plotinus, 540.

† The doctrine that everything is contained in everything else, with an expressed limitation to the physical world, was, as is well known, first advanced by Anaxagoras, while the idea that the particular living being, especially the human, offers an image of the universal originated in the Platonic philosophy. The contrast of the μέγας διάκοσμος and μικρὸς διάκοσμος is found as a title in the writings of Democritus; see, further, Aristotle, "Phys." 252, h 24: εἰ δ' ἐν ζῳῳ τοῦτο δυνατόν γενέσθαι τί καλῶναι τὸ αὐτὸ συμβῆναι καὶ κατὰ τὸ πᾶν; εἰ γὰρ ἐν μικρῷ κόσμῳ γίνεται, καὶ ἐν μεγάλῳ. Plotinus carries the Platonic doctrine further (see 284 G): ἔστι καὶ πολλὰ ἡ ψυχὴ καὶ πάντα καὶ τὰ ἄνω καὶ τὰ κάτω αὐτῇ μέχρι πάσης ζωῆς καὶ ἐσμέν ἕκαστος κόσμος νοητός) and adds the definition of the individual diversity, which was then further defended by Porphyry and Proclus; see Proclus ("Cr." iii. 103): πάντα ἐν πᾶσιν. οἰκείως δ' ἐν ἑκάστῳ. The word microcosm (μικρόκοσμος) was first coined after the development of the concept, and at a much later date.

in which the independence and positivity of the latter were defended undoubtedly exerted a direct influence upon the whole system of Leibnitz.

Modern thought, through Nicolaus Cusanus, brings the concept of individuality at once to the front. Although he is in general allied with the Neo-Platonics, yet he unquestionably makes important improvements and changes in their doctrines. The concept of the infinite development of the individual becomes far more prominent, and its independence and intrinsic nature are more clearly recognized.* But, then, the principle of individual peculiarity receives with its changed basis a new form. Separate existences are distinct, because if they were alike they would simply coincide—a demonstration which is justified only in the construction of a cosmology which comprehends all existence as conceivable in thought.† But when the whole in which the individual stands is finally considered as something gradually ascending, each individual is regarded as unique and as representing nothing else, and yet at the same time as referring to the others and to the whole, inasmuch as the one grade can not exist without the others.

* This is seen, for example, in the representation made of the mind as a living mirror of the universe, which figure may have been borrowed from Eckhart, 326, 39: "Als in einem spiegel widerschinet manigerleie bilde, wêre aber in dem spiegel ein ouge, daz möhte alliu diu bilde schen als einen widerwurf siner gesihtc." See, also, 142, 26, *et seq.* That the individual loses itself in the whole was expressly denied by Nicolaus, i. 92, a: "Si in una camera multæ ardeant candelæ et camera ab omnibus illuminetur, manet tamen lumen cujuslibet candelæ distinctum a lumine alterius."

† See i. 210 b: "Non possunt plura esse præcise æqualia, non enim tunc plura essent sed ipsum æquale." The so-called principle of indiscernibles was thus first suggested by Nicolaus Cusanus, and not by Leibnitz.

Giordano Bruno, who first employed the expression "monads" for individual unities as unities, constituted the transition to Leibnitz, in whom we find many valuable suggestions on this subject. For Leibnitz was not deceived by the apparent significance of the forms under which objects are casually first apprehended. He was original and ingenious in his consistent development and systematic construction of principles which by any other method of treatment had been left in isolation. He was equally original in his attempt to give the precise definition, and at the same time the broadest possible application, of the principle of individuality which was characteristic of his discussions of this subject.* From his earliest youth he defended this principle;† he brought it into relation to all the more important problems, and used it in the solution of them, and thus very properly introduced it into the whole realm of scientific discussion. With him the concept passes from the school into common life, and, thus receiving a prominent place in thought, it became the object of those various contests which continue even in our day.‡

These scientific investigations are closely connected with, though not directly dependent upon, the general demand, that individuality be asserted in connection with the general life of the nation and the race. Long before the concept of the individual was philosophically

* There is, of course, in all this much which is specifically new; but, to bring this out and to properly estimate it, belongs rather to a strictly philosophical discussion.

† As is well known, his first philosophical treatise is the "*Disputatio Metaphysica de Principio Individui*."

‡ In their discussion of the concept, the later champions of individuality, like Herbart, Schleiermacher, Schelling in his later writings, have not gone beyond Leibnitz, so that all discussion of the problem must lead back to him.

explained and justified among the Greeks, it had made its way into common life. The complete subordination and sacrifice of the individual expressed in Plato's idea of the state arose from his opposition to a tendency of the times which he considered pernicious, and so is characterized rather by moral energy and intensity of feeling than by the quiet and simple resignation to the objective which we find in the great men of the preceding periods. Aristotle tried to maintain a medium position by granting to the individual free scope and a certain recognition within the community.* The Stoics, as we have seen, wished to insure to the individual a place within the system of the world. But the popular thought, unconcerned with such replies and mediations of philosophy, went further and further in the establishment of the rights of the individual, although in fact only so far as to give to it a power coördinate with that of the whole, not superior to or conflicting with it. The relation of the ancient state to Christianity shows most plainly what fixed limits were placed upon all this freedom of action ; yet, on the other hand, the principle of individuality was carried so far that even so mild a nature as Quintilian was compelled to oppose its extension into education.†

In the course of the centuries, parallel with the decline of universal principles as applied to the social relations, to the relation of the sexes, and the relation of

* For his idea of the relation of the individual to the whole in the state, the following passage is especially significant ; " Pol.," 1263 b, 31 : *δεῖ μὲν γὰρ εἶναι πῶς μίαν καὶ τὴν οἰκίαν καὶ τὴν πόλιν, ἀλλ' οὐ πάντως. ἔστι μὲν γὰρ ὡς οὐκ ἔσται προϋῶσα πόλις, ἔστι δ' ὡς ἔσται μέν, ἐγγὺς δ' οὖσα τοῦ μὴ πόλις εἶναι ἔσται χείρων πόλις, ὥσπερ καὶ εἴ τις τὴν συμφωνίαν ποιήσειεν ὁμοφωνίαν ἢ τὸν ῥυθμὸν βάσιν μίαν.* See, also, 1264 b, 17.

† See " Instit. Orat.," ii. 8 : " An secundum sui quisque ingenii naturam docendus sit."

man to nature, we find an increasing freedom granted to the inner life, and a greater prominence given to the feeling of individuality. Although such a tendency was powerful enough to unfold a new world to the individual life in personal dispositions and feelings, still it was not capable of remodeling the development of life as a whole. This was reserved for modern times, the productions of which are connected with the results of the decadence of ancient thought by many often invisible threads.

It is no easy task to show the relation of Christianity to the problem of individuality, because it involves different and conflicting elements. Viewed in connection with a cosmology which makes the ethico-religious element the sole meaning and design of the world and of life, the events which occur in the experience of each individual must be, above all, the most important, and the individual must thus receive an immeasurably increased significance. The Church Fathers generally believed (in opposition to the ancient theory) that every individual is the object of divine care, for which reason the activity of the Church must be directed to each individual. The doctrine of the unlimited freedom of the will, generally held during the earlier centuries, by the form which it gave to action insured an independence to the individual; and the distinctive feature of that doctrine was recognized in the idea of an organic union of individuals in a comprehensive whole.*

On the other hand, the assumption of an absolute value in the individual was contradicted by the doctrine of eternal punishment, and we need hardly explain that, at that time, nothing was said of any rights of the indi-

* All things considered, of the Church Fathers Origen has best established the principle of individuality.

vidual as opposed to the general interests. As soon as the individual deviates from the general order he is considered as one who has gone astray, and is to be brought back to the truth, even though by coercion. The whole everywhere precedes the individual; it communicates itself to it as an objective power, demanding faith and obedience, so that all which occurs in the individual is intelligible only by the appropriation of a meaning which is raised above the arbitrary judgment of any one man. No salvation is possible for the individual, except as salvation for the whole has been and is an all-comprehensive fact, "that the opposition in itself has been removed constitutes the condition, the presupposition of the possibility that each subject should remove it for himself" (Hegel, xii. 228).

Whether these two tendencies have been equally worked out is more than questionable; we must rather answer negatively, because, as a matter of fact, the recognition of the individual was ever more and more repressed. No one contributed more to this than Augustine, who, above all others, both in his whole idea of the world and of life, and in his personal appropriation of Christianity, made the fullest use of his own individuality.

To be sure there was no lack, in the middle ages, of a counter-tendency. Among individual thinkers, Abelard was especially prominent in defending, in life and in doctrine, the rights of the individual, and he made permanent additions to the discussion, especially by his theories of conscience and personal disposition. Moreover, as a general tendency, the influence of the Mystic was felt, who could not insist, as he did, upon the subjective nature of the religious life, without applying the whole process of life far more directly to the individ-

ual.* But it was reserved for the Reformation, and especially for Luther, to recognize the religious life of the individual person as the basis of Christianity as a whole, and so, as a matter of principle, to insure to the individual a complete independence.† Only we must not forget that the freedom which Luther so energetically demanded, he struggled after, not for mankind absolutely, but only for Christians, so that it has a fixed condition and a determinate content. An abstract and vague freedom finds no defender in Luther.

Yet, on the other hand, for modern thought, individuality and the individual freedom of man as man are the basis of the whole doctrine of life. Every one is supposed to refer the whole world to his own inner nature, to receive and appropriate it to himself, and then to establish outside of himself what has been formed within. There are involved here a release from all limitations and an expansion of the sphere of life which essentially surpass the most extreme extension of the horizon of the world. As, in the conception of nature, after the destruction of the narrowing horizons, the field of vision opened without bounds, so here, too,

* Eckhart says, characteristically (3, 6): "Ez sprichet sanctus Augustinus, daz disiu geburt (nämlich Gottes in der Seele) iemer geschehe. Sô si aber in mir niht geschihet, was hilfet mich daz? Aber daz si in mir geschehe, dâ lit ez allez an." So Luther ("De Libertate Christiana") de-sires, "ut non tantum sit Christus, sed tibi et mihi sit Christus."

† His work "De Libertate Christiana" is especially to the point. See, further, "De Capt. Babyl. de Sacr. Bapt.": "Neque papa neque episcopus neque ullus hominum habet jus unius syllabæ constituendæ super Christianum hominem, nisi id fiat ejusdem consensu; quicquid aliter fit, tyrannico spiritu fit." "De Matrim.": "Quis dedit hominibus hanc potestatem? Esto, fuerint sancti et pio zelo ducti, quid meam libertatem vexat aliena sanctitas? Quid me captivat alienus zelus? Sit sanctus et zelotes, quisquis volet et quantum libet, modo alteri non noceat et libertatem mihi non rapiat."

was shattered all that had confined man and his action to restricted circles ; here, too, every one was supposed to have the immeasurable as his task ; yet here the infinity, in which, in the other case, the individual was lost, could be comprehended and experienced in the "universal seed-corn" of the rational being. Instead of one world, there exist worlds so numberless that the possible progress of the life of mankind is indefinitely extended.

Hence it is not so much the element of extent, as it is that of depth, which distinguishes the new theory from the old. When the individual receives the world into itself, it reduces it to its own intrinsic and essential nature ; what is external is changed, animated, spiritualized ; mental life itself is thus filled out and strengthened, so that the success of the one goes with that of the other, and they advance together in the unlimited progression. Depth has here no more a limit than breadth.

No order of the phenomenal world can confine the individual as thus conceived. For, as the germ of the infinite, and the supporting as well as transforming power of the universe, it is as incomparably superior to every other formation, of whatever value, as is the infinite to the finite, however developed. Neither State nor Church can exhaust the aims of the being which has immediately within itself the whole world of reason. Such combinations, instead of appearing as organisms which include the individual as a member, are rather formed from and supported by the individual as the point where the infinite and eternal enter into phenomena. If we seek for a form of coexistence, it can be found only in the society in which everything is reduced to the free, though not always intrinsically indefinite, will

of the individuals. State and Church are now seen to be simply kinds of society.* The freedom of the individual goes so far that it can not recognize any compulsory opposition. It has the law of its own life in itself, and produces from its own being the forms of its action, so that, just as in the legitimately ordered events in nature, the antithesis of the individual and the universal seems to be removed.

But such an exaltation of the individual was originally united with very definite conditions. Every individual is regarded as a participant in an intelligible rational world, and it is only his relation to this which can justify the infinite value attributed to himself. It is, then, not the actual but the ideal individual—the individual as an ideal concept—to which this principle is adapted. Yet, as such an ideal individual, it is not something ready-made and completed, but something which develops itself and advances infinitely ; not something isolated and opposed to the world and humanity, but something which includes the world and humanity, and receives them into its own circle. If the individual ever lives only for itself, from its very nature it can not do this without at the same time living for the whole world ; and if it is its right, and, under some circumstances, its duty, to place itself in opposition to all established order, this can happen only because it has a fixed position in the rational world, and because it is from this relation that its freedom is realized and directed. It is not the reflective arbitrariness of the subjective reason of the single man which controls life, but the law of the objective reason, the meaning of which coincides with the universe.

Though such a theory may protect the principle of

* This principle is brought out with special clearness by Locke.

individuality from the ordinary attacks made upon it, it undoubtedly involves in itself a difficult problem and a serious conflict of opinions, found in the practical difference between the individual as he actually exists and the individual as thus idealized. In actual fact the individual is something situated by the side of other things, dependent, limited, selfishly standing aside and shutting out the ideals of reason. Now, this empirical individual is supposed to develop, broaden, improve itself; and it is strictly held that what is apparently irrational is only a lower degree of what is rational, and that there is no such thing as a radical evil. But in any case the distinction exists at the outset, and what is empirical is undeniably a power in life. To lay stress on only one point, How, in this view of it, is a coexistence of men according to rational principles to be made possible? Can a system of social ethics, defended alike by ancient and by Christian thought, be maintained here; and is there not danger that a systematic unity in human life and action will be destroyed by such a theory as this?

Moreover, in modern times, the contrast between the idealized and the actual individual has become greater than ever before. As the former is made prominent, the latter falls into the background. While in olden times it was possible for a single man, like Aristotle, to fathom all knowledge, in modern times even a Leibnitz must be contented to determine simply outlines, and to sketch distant views, and the share of the individual in the general possessions becomes continually smaller. For, however rapid advance the individual may make, the whole moves forward still more rapidly.

Moreover, the technical control of man over nature,

which is a distinguishing characteristic of our day, is obtained only by the fact that the individual takes his place as one member of a series, and, in his place, accomplishes only his own work. When Franklin calls man a "tool-making animal," it is evident how far that presupposes the community of labor. For what more can the most distinguished individual do than in some single respects to take a few steps forward, thus presupposing and using all earlier productions? In the business of a manufactory there appears a peculiarly tangible problem, which is common to the whole of modern life; there are a danger and a necessity that the individual must consider himself as a part of a great machine, and give up all claim to the whole. However immeasurably the grand result may be advanced, we can not keep back the question, Who, then, is profited by it in strictly mental culture?

In the development of social life, too, there has appeared an increasing dependence of the individual. In the place of a free society, we have the economy of the community, in which the individual seems to be more restricted than ever before by the regulations of Church and State.

But, aside from the fact that such problems have appeared only gradually, it is also true that, whenever they have been present to consciousness, they have themselves, in times of bold thought, served to urge power on to the utmost, rather than to deter it from the risks involved. Moreover, where one granted the incongruity between the ideal and the actual, despair did not seem to be in the least degree justified, since from the contradiction between the infinite and the finite arose the very problem of the world and of life, and no events had any significance except as they

tended to overcome that contradiction in the process of the development.

Yet still further complications arose from the fact that another theory of the individual was united with the one just given—a theory which is based upon a strictly physico-mechanical conception of the world. This considers the individual as given only empirically, as the medium through which all other events are evolved. It is the unchangeable atom, out of which all further formation is constructed, and to which everything must be reduced, if it is to possess any reality in the world. Its significance, then, does not consist in any relation to a rational realm, and consequently no principle involving the employment of a concept of value can be introduced; but the individual can find recognition only so far as it exists and acts as a force. Power and right must be considered here as coinciding perfectly. Regarded from this point of view, the development of the community seems to be a physico-mechanical problem: it serves to bring the single powers into such a relation that they mutually disturb one another as little as possible, and, of course, ideal questions here find no place.

Such theories (which we find fully developed in Hobbes, the most consistent political philosopher of modern times) are open to criticism in their fundamental principles, and they do not furnish the least assistance in clearing up the confusion of concepts involved in the discussion. But they add greatly to the embarrassment, from the fact that to this empirical atomistic individual is transferred the whole estimate of value which had been won for the ideal concept of an infinitely advancing microcosm. The single individual as empirically given is considered as valuable in itself. Inde-

pendently of all combinations in communities and in history, without any connection with an ideal world, it is presented as rationally justified, and as both the basis and the measure of all truth. The normal condition, which in the earlier theory floated before the endeavor as its goal, seems to be given from the outset here, and the whole arrangement of life is constructed on this supposition.*

The consequences of such an idealization of the phenomenon can be easily seen. The deification of the contingent element in the single individuals must necessarily lead ultimately to the degradation, even to the negation, of those operations involved in the reason, and must seriously endanger all ideal meaning in life. The individual is now judged to be something which can everywhere demand absolute recognition and enjoyment of existence, and, independently of all determination and activity, can establish its rights and claims; † everything arbitrary and base can screen itself behind the principle of the infinite value of its individuality, although, as a matter of fact, only the ideal concept has any right to appeal to such a principle. Moreover, the absolutely worthless and subjective freedom here de-

* Up to the present day, to presuppose normal men and normal relations is characteristic of all practical life, as in theories of education, and especially of legislation.

† It is worthy of notice, at the present time, that the priority of rights over duties is frequently proclaimed without any attempt at concealment, although evidently without any suspicion of the ultimate consequences involved in it. See Bourdet, "Vocabulaire des Principaux Termes de la Philosophie Positive," p. 55: "Les religions, soit révélées, soit métaphysiques, placent les devoirs avant les droits; mais la science expérimentale les pose inversement. Pour elle, les prérogatives personnelles sont le fait nécessaire de la vie et de la civilisation." But, for such a confusion of concepts, no one individual nor one school can be especially blamed, since it is a result of the general development.

fended, if assumed as an ultimate principle, must render impossible, not only this or that particular form, but every rational development of the general life; and, although at first it exerts its dissolving power on what comes to it as foreign, ultimately it must make a most destructive attack upon the principles by the misrepresentation of which it has become an historical power.

In this connection we should remember that this idealization of the empirical individual at first served to stimulate to effort all the powers of man. Men seriously believed in the perfection of the theory, and from this faith derived an inducement to great deeds; but it was inevitable that the contradiction should soon become apparent, and the intrinsic falseness of the whole process of idealization be established.

The germs of this confusion in concepts can be traced back to the beginning of the modern era. Such confusion is clearly prominent in Spinoza; while in Locke it is the foundation of his whole practical philosophy, and from him it exerts an influence in all directions. Yet among the English the principle of the absolute value of the individual, and his absolute freedom from the general historical development, was supplemented and toned down to such an extent that its full consequences did not appear. It was left for Rousseau to develop them by a broader application of the principle. He carried out, in a classic style and in a complete form, the subjection of the entire content of the world to the intrinsic nature of the empirical individual. But in his writings, more clearly than anywhere else, appears the absurdity of ascribing to the isolated individual endeavors and feelings which are formed only in the life of the whole, and as the consequence of a long and gradual development.

. A reaction naturally entered with the culmination of these doctrines in Rousseau and in the French Revolution which put his theories into practice. Various attempts were made to overthrow the principles which were thus practically illustrated. German idealism, with all its diversities in other respects, was agreed in maintaining the necessity and universal validity of the aims of the reason as against the contingency of the empirical individual. In common life the recognition of the facts of general development gained ground, whether one's sympathies were with the Church or the State, and the desire for a better defined social regulation of life and action became ever stronger.

But, however far we may agree on this point in our criticism, and in single abstract propositions, as soon as it becomes a question of a positive concrete system involving the topics discussed, the paths diverge, and we meet difficulty after difficulty. Socialism, in its narrower sense, can be recognized as a reaction which proceeds from a consistent application of this principle of individuality, and, so far at least, as an historical power which is a peculiar growth of modern times; but it maintains and even increases the confusion of the ideal and the actual, and satisfies the deeper mental needs so little that, with all its justification in the individual, it is very far from solving the problem before us. Yet just as little can we expect to find that solution in a straining and idealization of the churchly concept of the middle ages, or of the ancient concept of the state.

Such developments are not broad enough to comprehend the fullness and depth of the life which modern times have opened to the individual. That which constitutes the real meaning of the world can not again return to narrower forms, and that which presses into

unfathomable depths can not exhaust its being in the organizations of the phenomenal world. The thought of the infinite value of the individual as a whole endowed with reason can no more assume a secondary place than it can be lost sight of. Our own day thus stands in the midst of contradiction and contest, and is all the more agitated the more directly these influences affect the life of the individual man.

HUMANITY.

“L’homme n’est ni ange ni bête ; et le malheur veut que qui veut faire l’ange fait la bête.”—PASCAL.

It is no easy task to gain a limited meaning for the concept of humanity. In scientific and popular definitions alike, narrower and wider significations are generally confused, almost without being noticed ; and it is not the least important consequence of this vacillation that it often escapes our attention how many different problems are involved in this concept. For our consideration, two ideas are in particular to be distinguished, though the distinction does not involve the impossibility of their being combined—that of humanity as a special virtue in a system of ethical life, and humanity as a comprehensive principle which controls all action and feeling.

Both concepts first received distinctness of expression and general significance as the vigor of ancient thought began to decline. The term *φιλανθρωπία* is found among the older writers, but was first employed by the Stoics* in the specific sense in which we here consider it. It was necessary that the narrower forms of life, which had till then laid special claim to man,

* *φιλάνθρωπος* and *φιλανθρωπία* served at first only to signify a friendly conduct toward men (as especially on the part of the gods) ; how little scientific significance the concept had is shown by the fact that the substantive *φιλανθρωπία* never occurs in Aristotle.

should be, if not destroyed, at least restrained sufficiently to allow man to consider what is human as the essential element. The Stoic estimate of the value of man rested upon his position in relation to reason; but the concept formed from such a connection was very soon taken hold of on other sides, brought into other relations, and so transformed. In the later part of the ancient era, the different theories, with all their problems and distortions, diverged and interpenetrated one another as they do to-day.

Yet from that time the histories of the stricter and the broader principles become distinct. After it was once clearly presented, the thought could not of course again be lost, that certain tasks and feelings arise from the relation of man to man. But the principle that this relation is regarded as the one which penetrates and controls the whole activity of life is involved in certain cosmological presuppositions, and must be considered a characteristic of the times in which it is found.

Yet, in the concept of humanity, in the narrower, and, as a principle, the generally accepted sense, as soon as we question more closely the definition of its meaning, we find so much divergence of opinion that we can make the concept include what is exactly contradictory. At the outset, the origin of this humanity is twofold; namely, the conviction of the peculiar value of the human being, and then that complex feeling which is generated by the social life of man. The conviction involves the consideration of the whole theory of the world and man's position in it. According to what man seems to be, in relation to the whole, will he be esteemed by his fellow man; and so the meaning of humanity, and its significance in the questions of human life, assume different phases, and have their share in the his-

torical development of thought. Yet the action caused by such humanity is always conditioned and limited by fixed general aims ; and, moreover, it is a common element in all varieties of theory to conceive of humanity as a duty, the defense of which by a man lends value to himself so far as he esteems and promotes the interests of other rational beings.

But the purely natural impulses are of no less value to humanity. It is the similarity of the conditions of life, of destinies, of feelings, which makes the interests of one the immediate concern of the others. Spinoza has keenly shown how sympathetic feelings and actions must arise from the common mechanism of the psychical life ; and although perhaps influences from other directions are involved in what he prizes so highly, still it is not necessary that we should give up that element of the simple impulse of feeling, in order that humanity may become a power to individuals and to the whole.

This humanity of feeling has no previously determined content and definite task arising from its nature, but it allows objects to approach it that it may seize upon them here and there where it is most aroused. And it is not so much the vigorously active man, who calls for a share in it, as the one who suffers ; not the rational being, ruled by design, but the empirical individual, with all his contingencies and needs, which are here considered only as weaknesses.

The significance of this kind of humanity, so nearly related to pity, consists especially in its intrinsic application to the individual of the rational obligation to assume a human relation to his fellows, and in its participation in man's natural instincts. It consists, further, in its presentation of a counter-weight to what might otherwise become defects in the interpretation of the con-

cept. Yet, exclusively adopted, it would decline into an indefinite and formless condition, since we could be sure of meeting the greatest confusion of concepts, where this kind of humanity was made the starting-point in the management of life. Moreover, humanity as arising from these feelings has never become an historical power ; for such feelings, with all their significance for the individual life, are still too deficient in persistent and common content to be able to furnish anything of importance to the general relations of mankind. Everything contingent and defective can take refuge under the protection of those feelings, and can demand and receive recognition, just so far as such a humanity conflicts with moral order and the general designs of the race.

In the historical development of the concept both kinds of humanity are naturally interwoven, sometimes the one and sometimes the other being the more prominent ; yet to the specific meaning is always given the preponderance over the ideal. To follow out these developments is beyond the limits of our undertaking ; but, in the endeavor to explain a possible confusion of concepts, we can not refrain from pointing out the essential difference between the Christian and the modern idea of humanity.

In the view of Christianity, man did not possess by nature an incontestable value, but all his importance came from his relation to God ; so that, in the general life of the race, he can be an object of value and of active care only as he is presumptively a member of the divine kingdom. The humanity of Christianity, as well as its whole ethical system, can not be severed from its religious basis. The ultimate purpose of active humanity must, therefore, be the winning of the individual to the ethico-religious life, for which reason it directs its at-

tention chiefly to the inner nature, in the endeavor to transform and re-create it. So far as external things are concerned, misfortune and misery are considered as something which can not be removed from this sinful world ; it is of no use, then, to try to remove them entirely ; we can only escape their consequences where they endanger and oppress the individual. Yet here a rich abundance of feelings finds expression, and Christianity proves itself to be far more mild and tender than were the Idealists of the decline of the ancient era.*

But, when modern thought raises its estimate of man because of his share in the common reason, humanity must free itself from all dependence, and take precedence of the other duties. When, moreover, the aim of life is taken to be the development and employment of every power, the new age must consider it its duty to the individual to bring him into such an activity, to realize all his endowments, to provide the external means by which action is conditioned, and to remove all impediments which stand in his way. The individual is thus intrinsically regarded as something naturally and normally developed, so that it is not a question of a change, but only of an increase of life. Yet the modern idea of humanity can not be criticised, as paying attention only to the external relations ; it taught rather, originally, that everything external ministers to the inner life ; until gradually the dangerous tendency appeared of looking for all happiness, as arising from the care for the external relations, and from the removal of external impediments. But, so far as these impediments are concerned, they are regarded, not only

* This appears in the way in which the Fathers, especially of the Latin Church, defended, as against the Stoics, the principles of Christian charity.

as something which is to be opposed here and there, and the results of which are to be reduced to a minimum, but as something which in a rational world should nowhere be allowed to exist, and which, by the exercise of activity, should be utterly removed. Hence, in view of the evils of the world, a far more comprehensive and pervasive activity is displayed than ever before. Yet the ultimate aim of this activity everywhere is not, as it is in the case of Christianity, to mitigate suffering, but to positively increase active exertion and prosperity.

While, beneath all divergencies of opinion on this point, there is a common and uncontested ethical basis, we still find a broader idea of the concept in the view which regards human existence, with the determination of action which springs from it, as the essential meaning of life; and this broader idea not only involves a specific cosmology, but also is dependent upon the historical development of the principle. The significance of the particular connections in which the individual is otherwise placed must have been withdrawn, to make place for the operation of the human reason in general; and the demand of the reason, in its general endeavors and feelings, must be admitted and maintained, if it is to become a power controlling the life of the whole. There must be certain great common aims and destinies, by which mankind may learn to understand and feel its unity in the universe, through which individuals may find themselves brought into mutual relations and driven to community of action.

We find these views confirmed in those two epochs in which the concept of humanity assumed a controlling position in life—in the decline of the ancient, and the ambitious rise of the modern era. In the former, the theory of the philosophers was based upon the practical

universality of culture. Yet the significance of humanity was found, not so much in any power to produce a thorough change in the life of the whole, as in the fact that it freed the results of the restricted sphere of life from their original limitations, and extended and developed them in all directions. Its problem was to raise the content of life to a universal power. Yet, for that very reason, considered from the standpoint of those times, it had a preëminently abstract character; and, as the earlier thinkers used it, contributed directly rather to the dissolution of what existed, than to its reconstruction, and it became more closely united with constructive forces only in Christianity, to which it was a necessary condition. But, as the earlier interpretation of life was undermined, and faith in the great objective position of man in the universe was shaken, so much the more did humanity become simply a sentiment founded on the consciousness of the common misery and common need of help, such as serves to bring men together.

The humanity of modern times, on the other hand, is characteristic of a period of ambitious development. New and important duties are opened up to life, from before which everything recedes which pertains to special realms of action. Only mankind as a whole can undertake to know the world, to receive it into its sphere of power, to subject it to its aims. In order to approach such goals man must extend the hand to his fellow man, and all must work together for the common end. In this connection, humanity is especially the formative principle; it does not advance from the particular to the universal, and so analyze all specific forms, but it derives everything particular from a comprehensive cause, and limits, constructs, and forms it by that

cause. But, by this activity, not only the position of the whole but that of the individual also is incomparably advanced. Of the being which internally and externally controls, forms, and even creates the world, we can not have too high an opinion; so that, in fact, scientists can hardly find words in which fittingly to express so high an estimate of the position of man.

In so close a connection of the idea of humanity with the peculiarities of modern cosmology, it was unavoidable that the former should be drawn into all the conflicts in which the latter is involved. There is all the less necessity of our entering upon this question more fully, since there is here a repetition of essentially the same development which we have discussed when considering the principle of individuality. Here, too, we find a confusion of what is ideal with what is actual, and connected with it an alienation of the general principle, a gradual development of the contradiction involved, and, finally, an insupportable incongruity between the doctrine and practical life. The conception formed of the relation of man to the universe is in marked contrast to the estimate of his value in the realm of practical ethics. The latter takes into consideration, not so much the fact that man is brought by his physical organism into a series with the other living beings, and is conceived as subject to universal laws (for this would not help at all in the ultimate decision of his value), as the fact that the ideal concept of mankind and of men, and the theory of their participation in an ideal world, although not given up, are still seriously shaken. Thus the individual as actually existent, with narrowly limited power, remains subjected to his selfishness, and usually degrades the highest things to the littleness of his own private aims.

And even if we are not ready to give up the transfer to the actually existent individual of the comprehensive estimate which arises from the ideal concept of mankind, and is based upon that alone, this, theoretically regarded, is only holding on to the consequences when the premises are surrendered. But, practically, the danger arises of glorifying that which is phenomenal and contingent, and of employing the idea of humanity in the palliation of all that is wrong, and in the weakening of all the nobler duties of mankind, and also of awakening claims and justifying estimates, the foundations of which are perhaps exactly contradictory to the real meaning of life.

REALISM—IDEALISM.

“Non quia difficilia sunt non audemus, sed quia non audemus difficilia sunt.”—SENECA.

THE term idea has a history long and full of vicissitudes, which mirrors with tolerable completeness the decisive changes in philosophy. As is well known, *idée* first received a specific meaning in Plato, who used it to denote the forms which lie at the basis of every existence, but which are not considered as arising originally in the mind, although comprehended by it. In this sense the expression remained specifically a scholastic term, so that it was always used with express reference to Plato.

Toward the end of the ancient era, with its entire transformation of the theories of the world, this definition also was changed; so that ideas were considered as originally existing in the mind of God, and thus received an essentially spiritual nature. Philo is the one in whom this change first appeared; many Church Fathers followed his example; and the new usage was fully established after Plotinus, on the basis of the Greek philosophy, had completed the transformation of the idea into something purely spiritual.

Accordingly, in the middle ages, ideas were considered as archetypes of things in the divine mind (Eckhart usually translates by *vorgênde bilde*), in which man has

a share only through his relation to God. But gradually, and especially through Nominalism, the transition was made to a purely subjective and human interpretation.* In this sense the word seems to have been first used in popular speech in France (we find in Montaigne *idée* as about synonymous with the German *vorstellung*); but it received a specific coinage at the beginning of modern philosophy, when it was used by Descartes, and others who followed his example, to denote all that is immediately apprehended by the mind, and so as the expression of the simplest psychical element.†

Yet it was necessary from the beginning to carefully avoid referring the word simply to the sensuous pictures of representation. Wolff translated *idea* by *vorstellung*, to which term it has been restricted by the Germans from the outset; and, as a scientific term, it has gradually lost its original meaning, except in its special uses, as in Locke's "association of ideas."

After a number of attempts in the eighteenth century to give a more precise and expressive definition, a new tendency, starting from Kant, was more successful. In so far as he understood by *idea* a necessary concept of the reason, to which no counterpart in the

* See Goclen, "Lexicon Philosophicum," under *Idea*: "*Ideæ sumuntur nonnunquam pro conceptionibus seu notionibus communibus.*"

† Descartes, "Responsiones," iii. 5: "*Ego passim ubique ac præcipue hoc ipso in loco ostendo me nomen ideæ sumere pro omni eo, quod immediate a mente percipitur, adeo ut cum volo et timeo, quia simul percipio me velle et timere, ipsa volitio et timor inter ideas a me numerentur, ususque sum hoc nomine, quia jam tritum erat a philosophis ad formas perceptionum mentis divinæ significandas.*" Spinoza, "Ethics," ii. def. 3: "*Per ideam intelligo mentis conceptum, quem mens format, propterea quod res est cogitans.*" In England, following the lead of others (as Cudworth), Locke, in particular, made a place for the new signification, though not without a struggle. In our language, Leibnitz was the first so to use the word.

senses can be given, he in a measure followed Plato ; except that what Plato considered as something actually existent previous to the existence of the mind, he located in the mind itself ; and what had been before a form of being superior to all becoming was now limited to impulsive force and law of action. The later philosophers carried out further the tendency here suggested ; and although each one has given to the concept something peculiar to himself, yet in its general meaning the controlling influence of the Kantian definition can not be mistaken. Most other nations have held to the use of the term as seen in the seventeenth and eighteenth centuries.

We must, then, distinguish four stages in the history of the term. What had been at first the primary concept of an æsthetic-metaphysical cosmology passes over into a religious sense, and there receives a purely spiritual significance, and then that which belongs to the power which controls the world is gradually transferred to the individual thinking being, until at last the expression is limited to a subjective psychological signification. But then a reaction sets in, since a universal and objective force acting within the mind is recognized as the impulsive power of thought.

The meaning of "ideal" naturally follows that of "idea." Ideal is first found in the best period of Scholasticism, in Albert, Thomas, and others, in the sense of archetypal. Although "real" is often opposed to it, yet the ideal should not for that reason be degraded to the imaginary.* But then the same change took place in this term as in the leading concept ; and, especially

* *Realis* I find first in Abelard's "Dialectics" ; *realitas* is a coinage of Duns Scotus. *Realista*, as a party term, is found first, according to Prantl, in Silvester de Prieria (x. 1523).

after the time of Gassendi, ideal and real, as well as idea and reality, became antithetical. Yet, in the specific phraseology of the schools, the whole mental being, so far as it consists of ideas, was called ideal; and the name Idealist was thus formed, to signify those who, in direct opposition to the Materialists, reduce all being to ideas, and deny the existence of external things.*

Kant follows this definition; yet, in place of the "material or psychological" Idealism, he substitutes the "transcendental" (also formal, or critical) Idealism, according to which "all objects of an experience possible to us are only phenomena; that is, mere ideas, which, as represented, have no existence in themselves outside of our thought" (iii., 346, 347). Fichte then gave to Idealism a decidedly practical tendency, since he understood it as the philosophical doctrine which explains the determinations of consciousness by the action of the intelligence. In opposition to this is Realism, particularly Dogmatism, which considers the phenomenal world as an existence independent of the mind. This signification given by Fichte, notwithstanding the many divergent definitions of the later philosophers, has remained the standard for the general understanding and use of the term. At all events, the reference of the term to the practical side of the question now predominates over its purely theoretical signification.†

If, in examining the question, we employ this in-

* Wolff especially establishes the phraseology, when he enumerates "three erroneous sects among the philosophers," namely, the "Skeptics, Materialists, and Idealists" (see in his "Works," 583). But Leibnitz, in whom I find the first antithesis of Materialists and Idealists, uses the expressions in a less specific sense, since he calls Plato the greatest Idealist (186 a).

† The distinction between the expressions "*ideal*" and "*ideell*" is worthy of notice.

terpretation, which has now become prevalent, the history of Idealism must involve the discussion of the tendency and nature of all human action. Though in all kinds of Idealism it may be an essential and common principle that man, in knowledge and action, is determined rather by the world present to the mind than by the phenomenon given through the senses, still this principle has received in its historical development very different forms, of which three are specially prominent.

In the ancient Idealism the world of pure forms is something which is objectively present, and manifests itself in the phenomenon, so that the mind is not under the necessity of producing it, in order that it may exist; the ideal powers act from eternity to eternity throughout the whole world; but with them the antithesis of what is material is eternally present, and it can never disappear. The ideal presents itself in the world, and constitutes in all events the essential and valuable force; but it can not form the world wholly as an addition to itself, and absorb it completely into itself. Our function is to know it, to recognize it, to use it in action without mistake; but ancient thought was far from demanding that the ideas be brought to a full realization in the world, and that the phenomena be conformed wholly to reason.

In Christianity, the antithesis of two worlds is not original and eternal, but an outgrowth; it is never formally recognized, and, if recognized, is to be, in part at least, again removed. The events of a higher world overarch and temporarily include empirical events, and are evidently manifested in them; but within this world the antithesis can not be removed; the evil is considered as empirically the more powerful; so that the problem here is, not so much to transform what is

permanent, according to the demands of ethics, as to rise essentially above the pressure of what is antagonistic, and not to allow one's faith in the reality of the higher world to be shaken by anything apparently contradictory to it in the phenomenal world.

With all the difference there is between these two kinds of Idealism, we can not fail to detect essential characteristics which are common to them, as contrasted with the modern doctrine. Each in its own way makes it possible to unite with all struggle and pain the certain rest of ultimate possession. This earlier Idealism has none of the restless, impetuous, timidly doubting, passionate nature, which at the present day we often necessarily associate with the concept.

Modern Idealism has from the outset a thoroughly peculiar character. We have here, too, an antithesis ; the antithesis of reason and phenomenon in an intelligible and an empirical world. But this antithesis is comprehended in a single universe. Reason is not something floating over the world, and only participating in it ; but it has its home in it, and lays claim to the very place which the phenomenon occupies. Its elements meeting thus in one point, the antithesis becomes a full contradiction, which must be absolutely removed ; and the process of the removal of this contradiction is, strictly speaking, what we have given to us in the events of the world.

The ideal is thus not something archetypal, which one can make his aim, with the consciousness of never being able to attain it, but it is a power exercised wholly in the phenomenon. It is not so much something in itself estimable as something simply powerful in being and in action. In this view, mind, which seeks to be self-active and to determine everything by

itself, is not given as something ready-made in the world, to manifest itself as representing or creating, but it goes through a process of development, and attains full control only gradually, as it advances from one stage to another. It always requires a more vigorous effort of thought to develop this theory, because it strikes far more deeply into what is empirically given than was the case with the earlier forms of Idealism. Since there can not be the least gap left between reason and phenomenon, the whole world must be apprehended, transformed, and worked over into a thought-realm. The ever-returning and ever-repeated demand is to make everything rational real, and everything real rational. Here, and here for the first time, it is considered as precisely the same thing to show anything to be rational and to claim that it is realized.

Hence, while Idealism before was always in danger of mistaking the mutual dependence of the internal and the external, and of leaving the visible condition of the world unchanged, and while it was formerly a favorite way of avoiding disagreeable demands to praise the intrinsic elevation of the mind above the world, it afterward came to be considered an unavoidable task to make the phenomenal world itself the abiding-place of reason, to establish everywhere the conditions of a rational life, and to remove every opposing element.*

We need not follow out the immeasurable influence

* See Fichte, "Reden an die deutsche Nation" ("Works," vii. 379). It is a natural instinct of man, to be given up only in a case of real necessity, to find heaven already on this earth, and imagine something as floating along before him, which is eternally permanent, in his daily work on earth; to plant and cherish what is imperishable in what is itself temporal, and to connect this life with the eternal, not merely in an inconceivable way and only by a chasm which is inscrutable to mortal sight, but in a way evident to the mortal eye itself.

of this general tendency in special lines of illustration, since the whole of modern history bears witness to it. But a part of its general effect is found in the two tendencies which we have so often seen acting with and against each other in modern thought.

The theory which judges the reason to be the rational explanation of the world's existence and the force which directs its history may explain all events by the speculative tendency of thought reaching out far beyond the philosophical schools ; but, for the apprehension of the phenomenon, and its union with the problem of the reason, the empirical tendency takes the precedence. In the former, the danger arises of being satisfied with a purely theoretical transformation of the phenomenal world ; in the latter, there is great danger of limiting one's self to the activity of what is external, and, without deeper insight into the nature of the rational process, of demanding its immediate realization in actual occurrences.

Out of this latter tendency arises the peculiar form of modern Radicalism, which, in the course of time, has always gained ground.* In fact, modern Idealism is thoroughly radical, since it desires to carry out in the phenomenal world the demands of the reason, wholly and without abatement, and not to let the least thing remain without a rational justification. But it gives to this problem, at the outset, so deep an interpretation that it attempts to understand the inner reasons of the development of things ; and, as soon as that happens, it follows as a matter of course that the attainment of the goal is not possible in any given moment, but involves the entire process of the events of the world. Not that it should be made an objection to any such tendency, that it follows out its aims too regardlessly, or with too

much energy ; for we can not understand how one in carrying out the principles of the reason is bound to regard any other claims, and how he can exert too much energy. The mistake is rather that the interpretation given is too foreign to the subject, and the aim is fixed absolutely or predominantly only on the development of the external relations and bearings of life, while the subjective relations are assumed as a side issue, and so are usually disregarded. In fact, what is to be attained is considered an external production, for the delaying of which there is not the least reason ; so that, of course, from the given premises, Radicalism alone is the legitimate conclusion. But with all the development of external power which it adduces, the depth of human nature remains untouched, and all the deeper interests of life are neglected. But if the peculiar nature of rational existence and action finds no recognition, we can say that, philosophically considered, the whole school derives its name of "Radicalism" from its real contradictory, since it never goes back to the primary root of things.

In any case, in the historical development of this school, the value of the subjective relations has been diminished, as the demand for an immediate realization of the ideal has become more pressing. It is not so much that greater claims have been made as that their relation to actual events has been changed. So far as claims are concerned, one can hardly demand more from any one, and can hardly express himself more explicitly, than did Sir Thomas More. But his Utopia lies outside of the world, while these ideal formations approach the world more and more closely, and finally claim to entirely absorb it.*

* For this reason thoughtful minds have clearly foreseen great transformations. Even Leibnitz spoke of the general revolution which threat-

It is further worth our while to notice the contradiction between the real doctrine of this school and the form which it assumes. For, so far as the doctrine is concerned, one can not at all maintain here an idealistic cosmology as a system which has for its fundamental presupposition the predication of the thought-element of human life and of the universe alike; and yet this whole system is carried out under the form of Idealism, and there are, perhaps, relatively more idealists in the subjective sense in this than in any other school.

Whatever theoretical objections may be made, it can not be denied that modern Idealism has ever assumed more and more the form of Radicalism in the sense just explained. This development, as we have seen, tends to alienate itself, and becomes narrowed with every advance; and whatever is not included in it has for the most part lost its foothold among the first principles of that Idealism itself.*

But doubt and dissent have extended beyond this, and led to a general reaction which has frequently called itself "Realism." Reality is here supposed to be the measure and the goal of the endeavor. Whenever idea and experience become contradictory, the latter is to turn the scale; all advance is to be limited by the relationed Europe (p. 387 a), and Rousseau said with great definiteness, "*nous approchons de l'état du crise et du siècle des révolutions*" ("Emil," Bk. iii.).

* It is not for us to explain the reason of this; we would only show that it is a most superficial view to take of it, to suppose that the whole commotion is produced by the fact that some parties have gone "too far" in carrying out their modern principles, and that the whole blame thus lies with the "excesses" of Radicalism. For, whatever objections may be made to modern culture, it is by no means to be treated so slightly as to suppose that it could be seriously endangered by such elements as these. These could never have obtained influence, had they not been fairly deduced from the doctrines laid down.

tions which are given in the phenomena, and so is to be a gradual process.

Of the latter truth, the leading idealists themselves might apparently be called as witnesses, provided it were certain that the unattainableness of the idea was caused purely by the immeasurableness of its content, and that it was not our own weakness which removed the goal far from us. Yet, if the meaning is that ideal and reality should never be brought into contradiction, such a view is free from danger only when there is no doubt involved in the concept of reality. Are we to understand by that what is momentarily present in the phenomenon? Then every one must contradict it who acts and strives with design. And, further, does reality signify the world with or without mind? The usual method of the opponent of Idealism is to represent the world as already existent without the aid of the mind, and then, to the endeavors of thought, to oppose what is thus permanent as an insuperable power; but this assumption presupposes the very point at issue. All Idealism starts from the principle that mind can enter into the phenomenon as an active and formative power, and, of itself, can change the condition of things—a principle which is emphasized by modern Idealism, in that it considers the mind as something which continually increases, and is capable of infinite development. Where shall such a being find stationary and impassable limits? Where, as opposed to it, shall anything external establish an absolute compulsion?

Such a faith is the possession of ambitious times. Nations and individuals dare to indulge it in the consciousness of inner power to oppose the relations in which they are placed, and to make the world a work-

shop of the mind. It is not what is given which forms here the measure of the possible; but one desires to pass beyond this, and boldly dares to strive after and obtains that which to the reflective consideration seems utterly impossible. For to such reflection everything great must appear incomprehensible before being realized, since its ideas are limited by what is commonplace and ordinary. That, too, which ultimately brings resistance and obstruction does not at such times act at the outset to invalidate the determination of the problem, but makes itself felt only in the struggle to carry it out. And, finally, man prefers to yield externally rather than to surrender absolutely, since even in his failure he saves that which constitutes the content and worth of life, and raises himself into an intelligible world.

But, on the contrary, it is very different when the intellectual activity of a period has passed its culmination; when the insufficiency of the individual life as contrasted with the universal problem of the reason is clearly seen; when the antitheses present from the beginning show themselves, in the decay of the power of penetration, to be contradictions, and thus fall asunder. Then what is external appears immense, the pressure of its power over us invincible, the mind, with all that it can undertake, insignificant. It is not that the world has thus become different, but we have changed; things appear larger, because we have become smaller: yet we involuntarily seek to lay the blame on something outside of ourselves, and wish to explain as absolutely impossible that for which we have no longer the strength.*

* In the decline of ancient thought, Seneca especially has made this fact prominent (see "Ep.," 116, 8): "Nolle in causa est, non posse prætenditur"; likewise the passage before quoted. Among modern writers, Fichte especially has opposed the comfortable yielding to circumstances. See vi. 70, *et seq.*

And if we have once lost faith in our own strength, we are really, as a matter of fact, weaker, and every additional doubt and failure increases this weakness. Reflective wisdom, the virtue of old age, shows us most vividly the contradictions of theories and the impossibility of their execution; the more closely we examine them, the more do the opposing elements seem to increase, while our own force shrivels up; everything human becomes small, persons and actions alike; and, in fact, regarded from this point of view, they are small; only the view is not broad enough to include any living, active, creative being in the world.

That ideas are then degraded to abstract thoughts, even ultimately to arbitrary images of imagination, is as little to be wondered at as that opponents of such ideas believe that they are superior to all those who maintain them in any form. But, in such tendencies of thought, of course nothing is decided concerning the ultimate signification of ideas in history and in life. Whatever occurs here that is great, for this they remain the most important power in the world; and, at all times, the development of thought will be ultimately determined by the school which can show that its doctrines are based upon ideas, and can be defended by the ideal theory.

OPTIMISM—PESSIMISM.

“Tu audeas dicere, hoc et illud est in mundo malum, cujus explicare, dissolvere neque originem valeas neque causam?”—ARNOBIVS.

I CAN give but insufficient information concerning the origin of the terms Optimism and Pessimism. Optimism is the older, as it was generally used in the first half of the eighteenth century to denote Leibnitz's doctrine of the best world; while Pessimism seems to be a production of this century, and to have been brought into general use especially by Schopenhauer.

We have no occasion to discuss the varied and vacillating meanings in which the terms are employed as applied at present; only it is important to distinguish carefully their use in a system of philosophy from their use in common life. The former concerns especially a theoretical judgment upon the significance and value of the universe; the latter, an estimate of the lot of mankind, or of the individual life; so that the answer will depend, in the one case, on an entire system of philosophy, but, in the other, on the relation of the human race to the problems of its life.

The many doubts in which the first undertaking is involved are as evident as is the fact that the question itself can be raised only upon certain presuppositions. The question can find no place, except in connection

with a system of cosmology which hopes to pass judgment upon the essence of things and the final causes of events. But the circumstance that, practically, it assumes a prominent position in all systems of the kind leads us to suspect that we are dealing here with something more than a mere logico-dialectical trifle. It is founded rather upon the instinct which leads us to justify to the practical reason as valuable that which the theoretical reason has wrought out as the essence of the world, and thus to overcome a dualism in the reason itself, which is at the outset as unavoidable as it is ultimately unendurable. However much the ontological consideration of things and the estimates of their value are to be kept separate ; however little we can from the one arrive directly at the other ; and however much it may seem a superhuman undertaking to try to combine the two as a unity ; still, as they both concern the same world, our thinking, so far as it remains true to its highest functions, will be unable to give up that attempt, and will feel itself impelled to new hazards by every failure. From this point of view there is not merely a single kind of philosophical Optimism, but there are as many species as there are attempts to obtain an adequate knowledge of the world. Every great general tendency essentially justifies itself when it proves that what it shows to be essential is at the same time valuable.

At the basis of every theory there is a common presupposition: the conviction that, ultimately, good and being are essentially united, and that evil is not something substantial, but something which manifests itself on the surface of things and in coexistence with them. This presupposition, which arouses at once all the objections to a philosophical Optimism, was ex-

pressed by Plato in the statement that the truly existent (τὸ ὄντως ὄν) is coincident with the good; and this is the origin of the doctrine which has pervaded history, that evil is to be regarded as a privation.*

But this general theory receives in every great system of cosmology a concrete meaning expressive of the peculiarity of that system. Throughout Greek thought Optimism has an æsthetic character. The world is good, even perfect, because it reveals everywhere measure and order, connection and balance. We find this principle expressed even before the time of the Socratic school.† Plato and Aristotle carried the idea out to its full extent,‡ and it maintained itself throughout the entire Greek philosophy and cosmology, extending as they extended.

There was a development or, rather, a change, only so far as, with the entrance of contradictions into the world and into life, it became necessary to yield to discords their rights, and so to transfer harmony to a position beyond the immediate phenomenon, provided one wished to maintain it as a general principle. We find in the Stoics the doctrine that what is antagonistic to the good is likewise necessary to harmoniously supplement the whole; but Plotinus finally brought out most emphatically the doctrine that a completed harmony must

* Augustine gave to this doctrine its most pregnant expression, especially in the "Enchiridion ad Laurentium de Fide, Spe et Caritate." According to his phraseology, evil is not *causa efficiens*, but only *causa deficiens*.

† See, especially, Diogenes of Apollonia (Frg. 4 by Mullach); οὐ γὰρ ἂν οὕτω δεδάσθαι οἶόν τε ἦν ἀνευ νοήσιος ὥστε καὶ πάντων μέτρα ἔχειν, χειμῶνός τε καὶ θέρους καὶ νυκτὸς καὶ ἡμέρης καὶ ὑετῶν καὶ ἀνέμων καὶ εὐδιέων. Καὶ τὰ ἄλλα εἰ τις βούλεται ἐννοέεσθαι, εὐρίσκοι ἂν οὕτω διακείμενα, ὥς ἀνυστὸν κάλλιστα.

‡ Aristotle applies it to life, "Eth.," 1170 a, 19: τὸ ζῆν τῶν κατ' αὐτὸ ἀγαθῶν καὶ ἡδέων. ὠρισμένον γάρ, τὸ δ' ὠρισμένον τῆς τ' ἀγαθοῦ φύσεως.

contain sharp antitheses, which are fully unified only when considered in their relations to the universe. The different arts offer numerous examples of this: a Therapist has his place in the epic; pictures can not be painted wholly in light; and artistic music must contain discords. Even if the harmony of the world remains incomprehensible to us, Plotinus can refer to the saying of Heraclitus that a concealed harmony is higher than one which is revealed.

The historical influence of this transcendent æsthetic Optimism extends far beyond the Grecian world, and in this form the primary principle has been able to adapt itself to all later systems. When Augustine understood the world as the self-manifestation of the divine being, his concept of order as all-comprehensive took precedence of the good, the true, and the beautiful, and in ultimate analysis evil seemed to disappear. After him Scotus Erigena advocated this kind of Optimism with great energy; Scholasticism appropriated it, and Leibnitz endeavored to make it intelligible by further analogies.*

Christianity, according to its general interpretation of the world, would have had to defend an ethical Optimism, in which the order of the world is shown to be one which in the most complete way realizes the moral laws. This would have involved the appearance of the antithesis between a stricter and a milder interpretation, which is seen in the old dispute, whether the world is created for the sake of the glory or of the goodness of

* See 548 b: "C'est comme dans ces inventions de perspective, où certains beaux desseins ne paraissent que confusion, jusqu'à ce qu'on les rapporte à leur vrai point de vue, ou qu'on les regarde par le moyen d'un certain verre ou miroir.—Ainsi les déformités apparentes de nos petits mondes se réunissent en beautés dans le grand.

God, whether justice or love is ultimately decisive, and, in either case, Optimism would have become strictly a *Théodicée*.^{*} There was no lack of sympathy with such attempts. But, to the common thought, evil was too real, and moral guilt especially was viewed too positively as something which absolutely should not exist, to allow of its recognition in any connection which justified it. In the fear of weakening the antithesis between good and evil by such speculations, it was the usual custom to meet only the superficial objections, while the fundamental question was set aside as transcending the power of the human reason.

Modern thought, however, with its unconditional confidence in the power of reason in the world and in the human mind, applied to the problem its full strength. There was agreement from the outset in believing that what is valuable is to be sought not in any one specific quality, but in the fullness of power and life itself; yet the two directions of thought which we have so often met are developed here also, and produce two forms of Optimism—the logical and the physical. In the former, the world is justified in that, when exhaustively considered, it is seen to be a work of reason itself. But reason is here considered as, in its essence, theoretical; and the world is judged to be the best because it begins and ends in thought. In such a case it is the formal determinations of thought which are assumed to control the world; and, only when every real content of every kind is reduced or, rather, is sacrificed to these, is the real proved to be rational and the rational to be real. What thought furnishes here as essential is, on that account, considered also as good; and to show that anything is necessary means the same

^{*} Leibnitz seems to have originated the expression *Théodicée*.

thing as ultimately to justify it.* This doctrine is defended especially by Spinoza and the German Constructive philosophers, and it may be considered as culminating preëminently in Hegel.

Against this derivation of the value of the universe from the logical process as thus conceived, Leibnitz fought with the utmost energy. Yet, when he charges this doctrine with confusing different concepts, the question arises whether his own attempt at a solution be not open to the same objection. When we work our way through the varied and not entirely self-consistent mass of material which he has heaped up in the *Théodicée* in defense of his own opinion, and reach the germ which is peculiarly his own, we find that his doctrine is not precisely what it would seem to be at the first glance. He considers the world the best, because it brings the greatest amount of existence into reality and develops vital force in the greatest degree. All completeness consists in quantity of being; perfection is increase of that quantity, and all pleasure is the sensation of completeness and perfection. However much he thus endeavored to determine being and power by this most general concept, the image of physical power always forced its way in, as was evident in the fact that to him the universe appeared as an aggregation. The many are so united that the greatest exertion of power takes place in the whole, and thus a kind of "metaphysical geometry" is practiced in the universe.†

* See Hegel, viii. 193: "Essential and good are synonymous." Fichte, vii. 14: "Necessary, and therefore good;" ii. 135: "The moral world is not the best, but it is the only possible and completely necessary world, that is, the absolutely good."

† Among the numerous passages adducible here, that from the "*De Rerum Orig. Radic.*" ("Works," 147 b) most clearly expresses the Leibnitzian doctrine: "*Hinc vero manifestissime intelligitur ex infinitis pos-*

Everything which apparently contradicts such a theory disappears before the consideration that we can view as decisive, not the individual of any kind, but only the whole; and that, in connection with this whole, the combination of individual things judged to be of less importance can often be more productive than the combination of greater things.* Evil, too, is here justified, in that the world which contains it realizes more force, and so is better than a world devoid of evil.

This attempt at a defense of the universe has exerted an influence upon scientific thought far beyond that involved in its purely scholastic form. Leibnitz derived from it the law of the least possible exertion of force; men like Lessing and Herder approved of its fundamental principle; and at the present day many prominent scholars adhere to it, and even in Darwinism we can discover a certain application of it.

It does not concern us how many objections may be urged against all these forms of philosophical Optimism

sibilium combinationibus seriebusque possibilibus existere eam, per quam plurimum essentiae seu possibilitatis perducitur ad existendum. Semper scilicet est in rebus principium determinationis quod a maximo minime petendum est, ut nempe maximus praestetur effectus minimo ut sic dicam sumtu. Et hoc loco tempus, locus, aut ut verbo dicam, receptivitas vel capacitas mundi haberi potest pro sumtu sive terreno in quo quam commodissime est aedificandum, formarum autem varietates respondent commoditati aedificii multitudinique et elegantiae camerae. Et sese res habet ut in ludis quibusdam cum loca omnia in tabula sunt replenda secundum certas leges, ubi nisi artificio quodam utare, postremo spatiis exclusus iniquis plura cogeris relinquere loca vacua, quam poteras vel volebas."

* See "German Writings," i. 412: "An unimportant thing added to an unimportant thing can often produce a better result than the combination of two others, each of which is in itself more worthy than either of the others. Herein is concealed the secret of predestination and the solution of the difficulty. Duo irregularia possunt aliquando facere aliquid regulare."

in general, and against each one in particular. The mere consideration of such theories will be seriously affected particularly by the objection that all attempts at solution presuppose a complete absorption of the individual in the whole, while the individual existences of the world must lay claim to different kinds of independence, according as they are parts of a work of art, elements of a logical process, or members of a sum-total. Yet in every particular form of Optimism, philosophical criticism will show the onesidedness and insufficiency of its concepts and propositions as compared with the general problem. All these it will disintegrate, at least in so far as they seek to offer dogmatically an ultimate solution.

In connect on with such a criticism, theoretical Pessimism undoubtedly finds justification. Whether it refers to the lack of definiteness of concepts in those positive systems, or opposes to them the immediate results of experience and sensation, it presents a well-grounded opposition. But the matter assumes a different aspect when Pessimism believes that it is able to estimate the real nature of the optimistic attempts, and ultimately to overthrow them, so as to establish itself as superior to them in approximation to the truth. For it usually fails to notice the deeper motives of those attempts, and its strongest weapon is its reference to the phenomenon which stands in opposition to every kind of Optimism. But none of those systems refer to the primary phenomenon. They do not assert that what is immediately given to the senses presents itself as rational, but only that in the events of the world something rational ultimately effectuates and realizes itself. But to attain this we must rise, perhaps, far above the phenomenon, and even come into opposition to it; so that philosophical

Optimists, like Plato or Augustine, can be admitted to be Pessimists, so far as Empiricism goes. In any case, such men do not need to go to the school of our modern Pessimists to be instructed concerning the severe side of life. The German Idealists, too, especially Fichte, did not in their judgments overrate the world of the immediate phenomenon;* and, if Leibnitz can be quoted as unconditionally an Optimist, and can be brought forward as the type of that school, this is the result, not so much of his philosophical theory of the universe, as of the combination with that of a purely personal characteristic—the endeavor to look, as far as possible, on the bright side of everything.

Optimism is certainly assailable, but, in fact, only because it ventures upon a task which surpasses our powers, and unavoidably imposes limits too narrow for the solution of a problem which stretches out into infinity. In this respect, however, it only shares the fate of all such ideas of the reason as can be contradicted and ridiculed equally well from the standpoint of passing events and from that of the reasoning understanding. Optimism may be attacked in the wittily frivolous style of a Voltaire or in the bitterly coarse manner of a Schopenhauer, and in particular cases may be justly open to criticism; while its fundamental tendency is not touched by any such attacks.

But, if Pessimism then wishes to build itself up into a philosophical system, and to maintain positively

* See Fichte, ii. 97: "Often we can not form too low an opinion of the immediate phenomenon. However mean an image we form of it, it is often superior to experience. Yet he who thinks evil of the general power of mankind caluminates mankind, and incidentally condemns himself." V. 537: "Since things are as they are, misery is still the best of all that is in the world." Moreover, it should not so often be forgotten that Hegel discriminates very definitely between phenomenon and reality.

the doctrine of the worst possible world, we must assert that such an attempt shares all the dangers and errors of Optimism, without being justified by any fundamental tendency of the reason, or showing itself successful in comprehending an abundance of phenomena under a positive principle. If Optimism applies concepts of value to the universe, there is sense in this, at least so far as it proceeds from the postulate of an essential connection of phenomena with reason; but, how, by a separation of the two, one can succeed in carrying over such concepts into the universe, it is difficult to understand. Though one may prove again and again that misery predominates in the life of the individual, of the race, of all sensitive existence, what would that prove in regard to the whole, in which all this externally disappears? * All the great Optimists have made the fate of mankind a part of and subordinate to the fate of the universe; and, if Leibnitz, especially, holds that imperfections in particular lines may be essential to the good of the whole, his philosophy would not (though his feelings might) prevent his explaining all human misery as one of these imperfections necessary in the interests of the whole.†

In brief, we can not yield to Pessimism, as a theory, any more significance than it attains from the simple fact that it is a reaction from Optimism. The whole question of the value of the universe is open to attack;

* Pessimism is still less successful than Optimism in explaining that which offers the greatest difficulty to any estimation of the world—that is, the (apparently) indifferent.

† In opposition to the Pessimists, he agrees with the idea of Maimonides (p. 582 b): “Que la cause de leur erreur extravagante est, qu'ils s'imaginent que la nature n'a été faite que pour eux, et qu'ils comptent pour rien ce qui est distinct de leur personne, d'où ils infèrent que quand il arrive quelque chose contre leur gré, tout va mal dans l'univers.”

but, if it *is* once started, then Optimism represents the positive impulse of science.

But Optimism and Pessimism as philosophical theories are utterly different from Pessimism and Optimism as feeling and conviction in practical life. For the question here concerns not an estimation of the universe, but a judgment upon the events connected with the human race and the interpretation of our personal relation to our duties and our aims. Such questions will at all times be occasionally raised, and will ever receive different answers, according to the nature and situation of the individual. That these, for the masses of men, become the most prominent questions, and include all phenomena within their horizon, indicates the existence of a definite crisis in the historical development of the race.

For reflection upon the value of one's actions and fate is not instinctively original to mankind. The race, as well as the individual, is so occupied with its activity in the pursuits of ambitious development and successful creation that it does not give up much time to meditation upon its own condition. This question presupposes a cessation of activity, a certain ascendancy of reflective consideration over intense action; it thus arises from a certain relaxation and irresolution, just as, for its own part, it increases these. The movement, once commenced, usually extends itself quickly. The lamer the creative power becomes, so much the keener becomes the eye to detect that which restricts and disturbs, so much the more powerful becomes practically whatever counteracts it, so much the more quickly widens the chasm between task and ability. Doubt is at first directed toward particular conclusions; but it soon takes a broader hold, all the problems and contradictions of

life become prominent, and in everything the antinomy is exemplified which arises from the unsuitableness of finite power to infinite tasks. The endeavor before was aimed at the perfect, the whole, the all-comprehensive; while now limits become everywhere apparent, and even the highest thing attainable hardly seems to lead us any nearer the goal. Under such circumstances, the disagreeable side of particular circumstances weighs the more heavily, being developed in its transitory and permanent elements alike. The problem of eternity oppresses the temporal experience, and the temporal experience with its suffering seems to extend into eternity. To whom can it seem a strange thing, if, under such a pressure, no joy in activity or in life can arise?

Pessimism finds its true location where the consciousness of such a chasm between the ideal and the real gives a character to thought and action. For idealism likewise recognizes an incongruity between the two. But, since it assigns to the difference no fixed quantity, and does not consider the obstacles as an invincible power, it admits as the result only an occasion for a so much greater exertion of power. But Pessimism considers the chasm as something which can not be diminished, so that man, standing helpless before it, can only grow weary in life and in action.

Yet such a view of the matter involves a self-contradiction. Pessimism is possible only so long as an ideal is everywhere supposed, though it may then be explained as unattainable: there must be something valuable in the world, if mourning over the deprivation of it is to be justified. The Pessimist is situated in this respect much as the skeptic is, who likewise forms the concept of truth, and only blocks up for us the approach to it. Both must be led by the logical conse-

quence of thought and life, either to give up the ideal, and with it all interest in it, or to formulate it anew in some shape which shall render an approximation to it possible.* There is no middle position which can be permanently maintained.

It follows from all this that Pessimism is not something fixed and easily determined, but it runs through a variety of stages, according to which its value also must vary. At first it is only a doubting idealism, and, as such, a necessary element even of the strongest convictions; but soon the uncertainty becomes confirmed, doubt becomes positive, the ideal becomes ever more distant, and is finally transformed into a mere phantom. Thus, only the empirical world and the empirical man are left; and, if the claim to any valuable element be not then given up, a contradiction must be everywhere established. Measured by the principle of reason, which is no longer a power penetrating the world, everything presented to consciousness seems small and paltry. A man can prove the insignificance of everything which he can ever attain, and show as well that the lower elements completely control mankind; although, with constant inner hypocrisy, he may represent himself to himself and to others as led by something nobler: and in all this he may be right, yet he is right only in view of this contradictory position which he assumes.

But this line of thought quickly advances a step

* Through this, Pessimism would become Nihilism. The word Nihilism, which has of late been employed so frequently, has its origin in theoretical philosophy, and designates the doctrine which denies absolutely all existence. In this sense Krug ("Philosophical Lexicon," 1st edition, iii., pp. 58, 59) employed the word, in 1828, as one which was well known. The transfer of the term to religious, political, and social life seems first to have occurred in France about 1830

further when the question of happiness is substituted for that of the significance of life. One begins to consider, not so much what is thought and done, as what is felt and experienced. The attempt is made to measure off, in comparison, the pleasure and the pain in life; and the answer to this can not be a dubious one, because activity, the most valuable thing in life, is left out of the account, and because, with that, man abandons the ability to withstand the relations in which he is placed. In fact, the circumstances in which we stand have not in themselves an unchangeable value. But their value is affected by the peculiar disposition of the person concerned, the connections into which the individual is brought, the forces which he can call to his assistance.* If the ultimate value can thus diverge widely from the superficial, and even a certain transformation (of course, in the causal-legitimate connection of the inner life) can be possible, it is evidently absurd to allow that which befalls us externally to be decisive by itself. If all that concerned particular individuals remained essentially unchanged in the course of their history, were there not thus special reasons if certain times made this fate of individuals so prominent? Not only have individuals and nations alike maintained the joys of life in the hardest struggles against opposing circumstances, but it has been the great destinies which have been the most safely protected against Pessimism, because they stirred man to his inmost soul and developed all his powers.

* See Augustine, "De Civit. Dei," i. 8: "Una eademque vis irruens bonos probat, purificat, eliquat; malos damnat, vastat, exterminat. Unde in eadem afflictione mali Deum detestantur atque blasphemant; boni autem precantur et laudant. Tantum interest, non qualia, sed qualiscunque patiatur."

But if the mind is once regarded as passive, and feeling, not action, is considered the determinative element of our lives, then, of course, Pessimism alone is justified, and it is folly to continue then to haggle with it over small details. For it has been sufficiently proved from antiquity down that, in the mechanism of the feelings, displeasure and pain easily conquer pleasure; and life, thus considered, is shown to be a continual vacillation between ennui and pain. Yet these facts can be explained in a way different from, and even opposed to, that adopted by the ordinary Pessimism. But we need waste no words over the insignificance of the suppositions on which this form of the doctrine rests.

There is, then, in the general historical development an antithesis, not so much between Pessimism and Optimism, as between periods of pessimistic reflection and of realized activity. There might perhaps be a thought of Optimism only when mankind has a full consciousness that its power is a match for its tasks, or even believes it to be superior to them. Yet, though such periods occur in the course of history, when forces till then repressed become free to act, and the power of mankind is proclaimed in spite of a disposition to renounce it, still, these are naturally transitory periods. For the task will very soon strain that power to the utmost, and repress any feeling of superfluous strength. Yet, if one applies the name Optimism to the acquiescence in all that happens, or the idle accommodation to circumstances for the purpose of avoiding all occasion for action, such mental dullness is lower than the lowest forms of Pessimism, since it indicates the extinction even of the capacity of reaction on the part of man, and we could well ask, with Marcus Aurelius, what reason there is for

living, if even the consciousness of failure is lost.* Yet what this practically amounts to is not a theory of life, but a surrender of all theories, with which scientific discussion has really nothing to do.

As thus, in the theoretical systems, Pessimism is only a reaction against the attempts to form optimistic concepts of the world, so, conversely, in practical application, Optimism is only an era of transition, in which a reaction is aroused against predominantly pessimistic doctrines. What are usually contrasted as Optimism and Pessimism do not at all come into contact; the one belongs to science, the other to man's disposition—the one to thought, the other to feeling.

It follows from all this that Pessimism, in its general bearings, is to be understood and estimated not as a scientific theory, but as an element in history; and from this point of view no one will deny that it has been an important question in the rise and fall of historical forces. Every particular method of conceiving of the world and of life will be shown as too limited in its details when compared with the general problem of rational existence, and so, in the progress of the development, will necessarily be given up as a particular and dogmatic theory. In the advance of history man may unite all his exertions upon some one form in particular, and overcome the antithesis of finite and infinite in the creative act; for it is the very nature of classic times to find in the phenomenal something eternal and universal, to blend the two together, and to apprehend idea and phenomenon, content and form, in an inseparable unity. Yet, in a further advance and self-development, the elements of insufficiency must become

* See Marcus Aurelius, 7, 24: *εἰ γὰρ καὶ ἡ συναίσθησις τοῦ ἁμαρτάνειν οἰχέσεται, τίς ἔτι τοῦ ζῆν αἰτία;*

prominent, contradictions and conflicts must be established, and the process of dissolution must commence. The historical process in the world involves the tragic element, in that the very fulfillment of the inexorable demand that the particular life be justified before the thinking reason leads to its own overthrow. For, when we seek to show the particular life as of universal validity, the antithesis of specific and general, of limited and universal, must come into consciousness, and with it must also appear the tendency to that retrograde process which we have just attempted to follow out.

Pessimism has here, unquestionably, an important function, so far as it defends against all finite forms the infinity of what is rational, and its incapacity of realization. The reflection and criticism which it practices act, to be sure, directly, only as an abstract force, and so destructively; yet, in the contest and dispute which are thus brought out, the bounds are set further away, new forces are aroused, the meaning of life is deepened by the struggle and pain, and the way is thus at least prepared for positive results. The general forces which were bound up in the particular formation are loosened from this groove, and so left free for new applications. The whole may at first seem mere destruction; yet analysis, too, is of service to life, provided we do not bring the reason down to the antitheses of the phenomenon, but regard it as embracing these, and protecting itself in its destructive as well as its constructive work. In this way Pessimism is recognized as a valuable means of historical development.

In any case, as regards its treatment, it follows from such an idea of it that, were every art of dialectics exercised, it can never be ultimately overcome on theoretical grounds. It follows also that we must seek the

explanation of it in its historical development, and, by that, form our conception of its specific meaning.

At the present day, too, the specific element in Pessimism must be brought out, and distinguished from other forms. Above all, the predominant disposition of Christianity should not be brought too near to modern Pessimism. Christianity, in fact, not only establishes an antithesis between the real and the ideal, but it considers the evil as the stronger power in man's actual experience, and explains passiveness rather than action as the problem of life;* yet faith in the reality and superiority of a higher world is not shaken, but only the more vigorously held in opposition to this doctrine. In distinction from the wearied and despairing Pessimism of the decline of ancient thought, we see here an immense impulse given to life. This world is given up only to obtain again another in the place of it; and thus, taken in connection with an ethico-religious system, the importance of human life is immeasurably increased, so that most of the Church Fathers can not depict its misery without, at the same time, defending its real value, and thus consciously opposing ancient Pessimism.†

In such a theory of the world and of life conflicting opinions are maintained, and even brought together, without restriction. Grief over the evil in the world can not be treated lightly, for it continues to be felt, and in its consequences can never be entirely removed;

* Only, in fact, passivity here is more than mere sufferance. We call attention to the phrase of Luther's so readily quoted: "*passio ist summa actio.*"

† Thus Lactantius opposes it ("Instit." ii. 1): "*Ne se, ut quidam philosophi faciunt, (homines) tantopere despiciant, neve se infirmos et nihili et frustra omnino natos esse putent, quæ opinio plerosque ad vitia compellit.*"

but the good still remains the prevailing and victorious power ; and, since as supra-mundane it is removed from the contest, and from subjection to incompleteness, even as it is shown beyond all doubt to act upon the world as an historical fact, it becomes possible to recognize the full meaning of suffering and pain without at all diminishing or casting doubt upon the ideal, and thus to include both members of the antithesis in the theory of life. It could even happen that the one might enhance the other. The higher the goal was placed, so much the more painful its remoteness appeared ; and, the more keenly the misery of life was felt, so much the more firmly was the assurance of ultimate victory maintained.

In fact, as historically developed, sometimes one and sometimes the other element has been the more prominent, and few persons have succeeded in bringing the two into an adjustment which was free from contradiction. While especially in the earlier centuries, and in the middle ages also, a sensitive Pessimism of purely human character was established, with an exclusiveness which renders it difficult to annex it at all to a Christian system of life,* in modern times the danger has arisen of leaving out of sight the immediateness and intrinsic truth of the feeling of pain. Usually many a man has lamented the suffering and misery of life, who was, nevertheless, at the same time, inwardly perfectly contented ; and those have often been the most industrious in emphasizing the limits of human endeavor who have made the least effort to attain the highest good.

* This is illustrated by Gregory of Nyssa, the most famous Pessimist of ancient Christianity, whose complaints often accord with the modern world-pain, and also by Innocent III., whose work "*De Contemptu Mundi*" occupies a prominent place among the pessimistic writings.

Yet, in spite of all such misconceptions and mistakes, there is no doubt of the value of the general tendency. The immeasurable deepening of the inner importance of life, established by Christianity, has been attained mainly through the antithesis and contest which we have just described, and which affected directly the endeavor and the feeling of men; and the formation of the Christian doctrine of life, the characteristic product of Christian skill, has also been considerably influenced by it.

In view of all this, it is necessary to say, that in fact the recognition of the evil in the world has been to Christianity the starting-point of its whole view of life; yet there is no question here of a strict Pessimism, since it does not conclude with that, but rather from the beginning keeps its glance directed to a certain goal beyond it.

Modern Pessimism is, on the contrary, Pessimism in the strictest sense, and it must appear as such with special force in its connection with the whole process of development. Modern thought opened with an endeavor arising from the feeling of an abundance of force. Man believed that he was strong enough to accomplish great things in the world; * he even dared, as we have seen, to undertake to make the world an ex-

* Bacon can be adduced here as the type. Since he allotted to Pessimism a somewhat ironical treatment, he himself wished rather to represent the power and greatness of mankind. See "De Augm. Scient.," iv., chap. 1. "*Deploratio humanarum ærumnarum eleganter et copiose a compluribus adornata est, tam in scriptis philosophicis quam theologicis. Estque res et dulcis simul et salubris. At illa (sc. contemplatio) de prærogativis digna visa res nobis, quæ inter desiderata proponatur.*" He explains it as desirable, "*ut miracula naturæ humanæ viresque ejus et virtutes ultimæ, tam animi quam corporis, in volumen aliquod colligantur, quod fuerit instar fastorum de humanis triumphis.*"

clusive habitation for the reason, and to realize everything rational in it. Such an endeavor called for the outlay of more strength, and exerted more influence on actual events than had been the case in any earlier epoch; yet the danger increased with the venture. Everything was staked on a great question, which must be decided in history and in actual fact. The citizen of modern times has no world in which he could save his ideals from the improprieties and distortions of the phenomenal life, so that all there is of obstruction, disturbance, hostility, must meet him in his ultimate doctrines. If the rational element can not be maintained in what is accepted as reality, it is hard to see how it can be defended in general.

We have seen brought out, point by point, the facts that practically, in the modern concept of the world and the modern doctrine of life, the attempts to complete and carry out first principles have ever run against greater problems and dangers; that a pervasive and intrinsic contradiction has been prominent in them; and that as the endeavors have been concentrated, and have become distinct, the leading tendencies themselves have been involved in doubt. Relaxation and dissension were the natural results of the crisis which, though less clearly recognized, was still vaguely felt; and it is easy to understand how such tendencies should appear with special force, after the vigorous exertion of power and self-laudation of mankind which preceded them.

In view of all this, we consider the Pessimism of our own day as a phenomenon which is historically well founded, and which can not be kept back by any theoretical considerations. However firmly we may maintain that the whole statement of the question as

between Optimism and Pessimism is a wrong one, and consider it the problem of philosophy, as of all activity of the reason, to raise man above the point of view which the question supposes ; still, if one does enter upon it, Pessimism is the more correct answer, since it gives expression to a crisis which is actually present.

Yet many tendencies are practically united with it, which have had an important share in producing the state of things which relatively justifies Pessimism. Especially has the whole littleness of the reasoning understanding now taken refuge here. While in former centuries this understanding was inclined to find the world endurable, and even good, and was never wearied with praising the best of worlds, it has now turned to the negative criticism which in self-sufficiency pre-judges the universe. Yet, more closely examined, should not rationalistic Optimism and critical Pessimism stand pretty nearly on the same ground ?

Then, too, we find associated with Pessimism sentimental and romantic ideas, which likewise run back into the past. One revels here in the confusion and incomprehensibility of tender feelings, and, floating between a sublime mysticism and a rough naturalism, makes a luxury of pain. By the side of such tendencies, which always keep a certain connection with general historical fact, the dogmatism of party feeling and the self-sufficiency and paradoxism of individuals are maintained—all of which simply suggests the saying of Seneca, "*Non potest fieri, ut omnes querantur, nisi querendum est de omnibus.*"

Yet, beyond the mistakes of individuals, the significance of the general tendency can not be mistaken ;

and, however much any particular form of Pessimism, or professional Pessimism in general, may challenge contradiction, still that is not decisive of the deeper problems which the tendency indicates. As ultimate truth, Pessimism may be rejected; as a warning, it can not be mistaken.

CONCLUSION.

WE take the liberty of glancing back at what we have thought it necessary to show regarding the history and present position of the concepts discussed. We saw at the outset how that which is to-day involved in the concepts is evidently the result of a long historical development, and how, even in the expressions used, the labor of many centuries is concerned. We are indebted for these, perhaps, less to ancient thought than to the middle ages, the scholasticism of which is of especial importance in the establishment of a scientific terminology. Yet nearly all that is borrowed from Scholasticism externally is intrinsically changed—at first by the original thinkers of the seventeenth century, and then by Kant. What we have of independent German expressions dates back no earlier than the sixteenth century.

The case is different as regards the concepts themselves. The action of the middle ages here is almost restricted to opposition, which, to be sure, forms no small element of power, while usually the threads lead back to ancient thought. Little as we would wish to lessen the importance to us of the Socratic school, there can be no doubt that we owe far more than is generally supposed to the Stoics and Neo-Platonics, and in general to the closing era of ancient philosophy. The Stoics offer to modern concepts more points of contact than any other system of the past; while the Neo-

Platonics have left upon the history of concepts traces which, though less numerous, have still made extremely deep impressions. The original thinkers of modern times, passing over the middle ages, have joined on to this later part of ancient thought.

In modern times the seventeenth century is unquestionably prominent, and, when in the general development two opposing schools here diverge, we can not neglect either of them if we wish to understand the modern treatment of concepts. The speculative system-makers have, without doubt, created more that is positive; yet the analysis and criticism of the empirical inductive thinkers have been of no less importance to the advance of the whole.

Considered from this point of view, Descartes, Leibnitz, and Kant should occupy the first rank among the leading minds: Descartes, because he established the general tendency of modern thought with original power, and spoke decisively on the most important points; Leibnitz, because he made up a comprehensive system from modern ideas, and attempted to overcome, by the unifying force of his own mind, all apparent and actual antitheses; Kant, because, in penetrating the positivity of things, and in his microscopic analysis of what is composite, he brought out everywhere most clearly the peculiar properties and presuppositions of the concepts, and so sharpened and deepened all the problems involved.

Yet, were we to select from them the one who has the most positively and directly determined the concepts of the present day, we should name, not Kant, but Leibnitz.*

* We do not here, of course, express an estimate of the ultimate value of philosophers, since what they may have accomplished in regard

Of less prominence, in comparison with these, was the influence of the followers of Kant, and of the Constructive philosophers, although they accomplished more, directly and indirectly, than is generally supposed.

Yet, at any rate, the school is far more important which, starting from opposition to the Constructive and Systematic philosophy, rests upon the natural sciences, and, becoming positively constructive, forms not only its own theory of the world, but also a certain system of concepts. When critically considered, it is found to be virtually a carrying out of the primary tendencies of modern thought, and its strength lies, in the main, in the fact that it seems to defend, with peculiar resolution, something which, in our day, counts upon the general recognition of its self-evidence.

In general, we can say that our concepts, regarded separately, can be traced back to three main roots; that is, to ancient thought, to the seventeenth century, and to the Kantian philosophy; but, if we consider their combinations and general tendencies, we should select from history, first of all, modern thought since the fifteenth century, and from that again the present day in the sense so often explained. In this the later always intrinsically presupposes the earlier, so that it is impossible to understand the tendencies of our own day without casting a glance at the whole.

In such a variety of elements the presence of what is diverse and even contradictory in the modern system of concepts is to be expected. If we disregard the re-

to modern concepts does not at all sufficiently express their real position and importance. This is especially true of Spinoza, whose influence upon the present we are compelled to consider as in the main unfavorable, though we do not, for all that, question his peculiar greatness. But this is decided by other elements than those which are here considered.

lation of what was taken from earlier times to what is modern, we find that in modern thought the difference between the inductive and the speculative tendencies produces everywhere a dissension, and, for the scientific interpretation of concepts, the difference in principles of method in Leibnitz and Kant shows still further the results of this dissension—results which still continue. In Leibnitz, we find the endeavor to classify everything, and to show that what is heterogeneous is only one stage of the manifestation of a single force; in consequence of this, we find a denial of the specific, a change into the cosmic, an immense synthesis of individuals into a comprehensive mechanism. In Kant, on the other hand, we find an assertion of the specific, and so a reappearance of the antithesis; an analysis of what, till then, had appeared simple into still simpler elements; a resolution of the world into its ultimate factors, the union of which naturally remains inconceivable. While Leibnitz superordinates and subordinates the heterogeneous, with Kant it remains, in the main, coördinate. Our system of concepts has been taken from all this; can it be supposed to have thus preserved completely its intrinsic unity?

Further difficulties arise from the relation of the expression to the concept. Modern thought found a completely formulated terminology, dropped out much from it, to be sure, yet still retained what was important and essential; and did this all the more because, at the outset, the change to the modern use of terms was not fully understood, and its distinguishing features were, for many reasons, brought out very slowly. Modern thought was thus interpreted through the ancient, and the way opened to much confusion. Moreover, within the whole system, different tendencies laid claim to the

same place, so that things really very divergent were mixed and interpenetrated together. Hence it frequently happens that concept and expression are not equivalent, and that the expressions are far from sufficient for concepts actually existent. A large number of concepts often meet in a single expression, and we have in general far more numerous, and far more peculiar, concepts than would seem possible from the verbal symbols. All this involved little danger so long as, in the ambitious thought-life, the concepts were energetically and clearly presented in their distinctions from earlier forms, and in their peculiarities as related to opposing concepts; but, as soon as a change took place in the vigor of thought, the inadequateness of form to meaning necessarily led to great confusion.

But such confusion was increased by the haste and restlessness of modern life, which no longer allowed time for the elaboration of the concepts; by the dissipation of thought-activity into various directions, which restrained the endeavor to discover agreement; and especially by the attempt to bring the results of scientific investigation into an immediate participation in and application to common life. For, when this aim becomes prominent, thought must ultimately be intrinsically lowered. The part which one ever endeavors to act becomes finally his nature, so that one thinks on the very same level to which he at the beginning wished to descend. But it is evident that the concepts especially must suffer in such a lowering of thought. For most men are interested, not in these, but in the results, the most tangible results, perceived by the senses.

The consequence of all this is, that confusion of concepts which we have been throughout compelled to no-

tice. And the dangers of this are not insignificant. The community of thought-life is shaken; and, when we can no more explain the most important and subjective problems, there is danger that the individual, with the germ of its being, will be isolated, alienated from the common life, and this must result in a sudden decline of the activity of thought.

Yet we meet still greater problems and dangers when we consider the nature of the concepts, and we must again call attention to the fact, that our present object is not a criticism of the work of special sciences; and, also, that a complete cross-section of cotemporary thought can not be given; but that we pretend to judge only the prevailing tendencies which do the most to unite single forces in coaction, and to determine directly and indirectly the development of thought.

We can not fail to notice in these tendencies a great degree of activity, an endeavor to follow out the leading thoughts on all sides, and to establish them in every particular. Yet, so far as the execution of this is concerned, there is unmistakably in the general concepts of the world and of life a lack of strict consistency and of systematically constructive force. A development is commenced looking to the transformation of the naïve idea of the world into a scientific idea, certain elements are established, directions of thought are marked out; but then it is not carried out to the end, but one breaks off in the midst of the process, and turns back suddenly to the point of departure of the naïve view of the world, which is now regarded as having been won and justified by scientific work. The explanations employed, which it might have been necessary in the process to deepen, expand, supplement, are used now in their original interpretation as entirely sufficient. He who

would go beyond them is said to oppose the "reality," and to turn investigation into scholastic subtlety. In this way something is easily presented as an ultimate determination, simply because it seems self-evident to the common feelings, the passing consciousness. The danger arises that obscure endeavors and scientific productions will be confused, and that the same certainty which is employed in the essential meaning of the postulates will be claimed also for those specific applications of them which are scientifically crude.

Thus we see that the independence of penetrative and systematically constructive thought, as opposed to the original phenomenon, is called in question throughout; which again, on its own part, shows the general tendency to deprive mind of its substantial importance in the events of the world, and to form all concepts and convictions by eliminating the thought-element as far as possible. Following out this idea, then, all activity which the possession of thought contributes to the possessor must be understood as an arbitrary and disfiguring addition, which is to be removed if we would penetrate to an objective truth. But, where this tendency obtains control, the central unity and fundamental basis of the system of concepts must ultimately be lost; the foundation of ultimate principles must be endangered; and, through the lack of an endeavor to include the totality of things, what is empirically prominent will necessarily make a vigorous effort to usurp the whole realm of science.

We have noticed in detail the lowering of the concepts produced by this, though less in their concrete application than in their nature, as they are obvious to the general consciousness. For the present condition of things is such that we, in fact, possess and actually

use much more than we believe we have before we begin to reflect. Instead of repeating in detail what has been already said, let us only glance at the way in which the investigation of causality reflects itself in our consciousness. Mechanism is from the first considered the only method of causality; the suppositions and conditions which it involves are not taken into account; the many questions to which it gives no answer are considered not as open to discussion, but as positively decided in the negative; the point where it leaves off the investigation forms the conclusion of the whole, as if the world came to an end where we are wearied of investigating.

Moreover, this kind of explanation is confidently carried over to the realm of mind, as if the question dealt with something self-evident, though such extension, as regards the possibility of its application, presupposes an interpretation of the principles of mind, which has been for centuries the subject of dispute. And, in all this increase of its claims, the explanation lacks utterly any firm foundation and intrinsic justification of the causal connection itself. How the product of a subjectively psychical and externally conditioned process—for causality as usually understood is no more than this—how this can be objectively and universally applied in the universe, and can attain even a repressive force as against the mind, all this remains completely unexplained.

We find a similar state of things in regard to the other concepts, and, in fact, even more in their practical application than in their theoretical treatment—everywhere misapplication, limitation, lack of intrinsic foundation and justification, without the surrender, on that account, of any of the claims asserted for them; so

that we might say that the thought-life of to-day has a meaning, the premises of which are shaken, or, at least, are not established in the general consciousness.

Yet, further, we have noticed an antithesis in principles between the concepts as theoretically and as practically considered. For the theoretical cosmology of modern times, the scientific conception of the external world of nature has been from the beginning the standard. Even with the Idealists, for the most part, the concrete nature of ultimate principles and concepts has been presented as if determined by the analogy of physics. Modern philosophy is essentially a universal mathematics and physics, in which mankind in general and still more the individual man assumes an extremely modest place.

But, on the other hand, as practically applied, this doctrine presents an estimate of the value of thought which presupposes mind as the essential and fundamental thing in the world. The philosophers, too, who proceed in purely theoretical investigation by the empirically inductive method, practically interpret mind as an ideal concept, which is determined by a rational meaning, and by an inner nature valuable in itself, and superior to everything external. By this our practical life is, as a matter of fact, formulated. In law, in sociology, in education, this estimate of mind forms the foundation, though often unconsciously recognized. Science and life are brought thus into open contradiction. We are unable theoretically to justify that which practically we will not and can not give up. As a result of all this, it is not only philosophers and theologians anxious about their systems who stir up problems and contradictions in the present state of things, but every man who reflects deeply upon his own life must feel them directly, and fight his way through them.

But, whenever we find in the general thought-life a misapplication of principles, and so a contradiction between doctrine and practice, we can well call it a crisis; and science is always right, in such a case, in subjecting the foundation of the whole to criticism. When we once find ourselves in doubt, we must turn back to the principles of modern thought itself. For that the present crisis arises from the insufficient carrying out of these principles can not well be asserted, in view of the wonderful mental force which was employed in their formation. Who would dare to solve the problem which defied the genius of a Leibnitz? Still more erroneous is it to throw the whole blame upon the excesses and mistakes of particular persons or parties; for how did it happen that these obtained so great a power, and that the truth was so weak to resist them? One man may contribute more to the result by what he does, another by what he leaves undone—the blame and destiny are common to both.

The present condition of things is, in truth, different from that of the thought-culmination of modern times,* but it has been developed from it in causal connection, and has only brought out what had been already established. How was the misapplication possible, if the foundation was firmly laid? How could there be a doubt as to the value of the reason, if it originally held

* There is an essential difference between the present day and the period of culmination, in the fact that, in that period, not only were there other forces, especially Christianity, which acted still more powerfully, in connection with the modern principles, but also that both members of the antithesis, which we have met throughout, were still a match for one another, and by their reciprocal interaction increased and deepened each other. Idealism is not now refuted, but, in common life, it is limited to an ever-narrower sphere. After the supplementing and the contest thus subside a falling off must be the result.

a secure position? How could discord become prominent and powerful, unless it was present from the beginning in the principles?

We find ourselves thus ever referred back to an impartial estimation and criticism of these primary principles. It is especially necessary that we do not fabricate dogmatically a self-sufficiency in our own range of thought, or faith in the all-sufficiency of our own principles; and that we oppose orthodoxy as a boastful confidence in our own reason, not only in its forms of development, but also in itself.

Yet, if we understand the problems of the present day in their historico-genetic connection, and know that the force which impels our present thought is derived from the primary tendency of the times, and if we are further convinced that this tendency has been of incomparable service in history in general, and has produced results which can not be denied even by their most resolute opponents (as, for example, exact science, the development of culture, and the recognition of individuality), if we bear all this in mind, it will not be possible to criticise without at the same time making prominent the greatness and fruitfulness of modern principles, and without rising above all petty partisan strife. Whether one man appears as a friend, or another as an enemy of those principles, is a matter of the most complete indifference; for we treat here of the forces of the world's history, which are independent of the arbitrariness and opinions of individuals and of parties. The only question is, whether those principles exhaust the whole content of human life, and whether they do not need to be taken up into a higher connection if they are to assert themselves in their original purity, depth, and power.

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